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Administrator, Advocate, or Therapist?

DAN C. LORTIE

*A Psychologist's Second Thoughts
on Concepts, Curiosity, and Discovery
in Teaching and Learning*

BERNARD Z. FRIEDLANDER

*A Second Study in the Teaching
of Creativity*

GEORGE I. BROWN

The School and Self-Understanding

JOSEPH SAMLER

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DAN C. LORTIE

University of Chicago

Administrator, Advocate, or Therapist?

ALTERNATIVES FOR PROFESSIONALIZATION
IN SCHOOL COUNSELING

These are days of high excitement for those engaged in school counseling.* A new recognition of the import of counseling services prevails: extensive assistance to guidance is a significant feature of the National Defense Education Act, strong endorsement for increased counseling service occurs in that potent source of legitimation, the Conant Reports, and programs directed toward assisting the urban disadvantaged—programs of increasing moment—place heavy emphasis on augmented guidance activities. Small wonder that members of the counseling field show heightened self-awareness and concern for their occupation and its future. Small wonder that counseling leadership seeks to seize the moment to attain professional status for their timely work.

The sociologist who is invited to comment on these trends is likely to find himself, like the late arrival at a lively party, in a somewhat ambiguous situation. He can, of course, jump in and join the festivities, but this line of action contributes no special benefit. Yet should he stand aside, calm and detached, his sobriety may simply inhibit the vitality of others. Permit me to make one point early in the hope that subsequent observations will not appear to be anti-convivial. The continued development of counseling services is, in my opinion, crucial in the construction of a more specialized, rational order in the public schools—a kind of order which will be more and more necessary in the years ahead. The issues involved in refining counseling activities are

* In this article no distinction is made between counseling and guidance. [Editors]

too critical to set aside; of the questions pressing for scrutiny, few are more urgent than the professionalization of school counseling.

To professionalize an occupation is to crystallize it in specific, formal and even rigid ways. Careless decisions can "freeze" inappropriate solutions to problems in organizing a complex field of work. Serious risks are involved—an inadequate structure can result in the unwitting sabotage of earnestly sought goals. Counselors could, in short, organize their work in such a way that future years will see them doing things they never intended in ways they never planned.

Indications are that guidance does face serious problems in professionalization. McCully, in a review of major writers in the field, can find no consensus on what are the essential and primary services offered by counselors.¹ In the pages that follow I shall argue that without such a consensus—without a clear image of core services and skills—effective professionalization of guidance will not occur. I shall attempt to demonstrate that the current position of the counselor contains diverse, contradictory functions and that members of the occupation will be forced to resolve thorny issues in moving toward the professional model of work organization. The analysis, however, is not exhaustive; logical rather than empirical, it seeks to isolate issues which require attention from the professional group. It should become clear, however, that resolution of these issues will require extensive and thorough research into the current work reality of counselors and others working in schools. I hope that the ideas put forth here will prove to be hypotheses capable of empirical confirmation, rejection or amplification.

I

To make a profession of an occupation requires monumental effort of those so committed.² It calls for the development and diffusion of collective beliefs, it involves patterning relationships the practitioners will have with persons inside and outside the profession, and it permeates the personalities of members of the colleague group. It is, in fact, the construction of a sub-society within the larger community, for it features a unique culture, peculiar modes of interaction and an apparatus for the socialization of would-be members. Some of this effort is informal and emerges spontaneously in the course of day-to-day activities, but an enterprise of such scope also requires formal political work—a working constitution must be hammered out. Constitution-making is a sequential process in which alternatives which are selected early constrain later decisions; the cumulative effect is not only something new and unique but a structure in which many logical alternatives have been ruled out. In a sense, we can describe professionalization as a "narrowing" process

—a narrowing process, however, which rests on basic agreements hacked out over the years.

Although we cannot engage in a complete analysis of professionalization processes here, we can illustrate some of the typical mechanisms by a brief review of three problems which face every profession. (1) Who will be admitted for training? (2) How will candidates be prepared for practice? and (3) How can members of the profession be induced to comply with its standards of conduct? The answers selected to these questions become the structure within which individuals are shaped to the professional ideal. Conversely, perhaps without awareness, the answers chosen reflect the group's conception of what its members seek to become.

Modern professions must come to terms with the university system, and the latter has much to do with the answers given to the admission question. The casual entry of an earlier era gives way to a controlled, single route of specific educational requirements which frequently imply allied characteristics. The age of entrants, for example, usually goes down, for university regulations and/or facilities frequently proscribe participation in later periods of the life cycle. Beginners are truly beginners who come to the field without previous experience and specific commitments to given ways of doing things. The newly formalized requirements are usually longer, and these greater time demands increase the direct costs of education and such indirect costs as income foregone; the social class background of students, often linked to financial resources, may change as a result. The sex balance of the occupation may shift as rigidly specified training makes it more difficult for women to combine the career with family responsibilities. Thus does insistence on new academic qualifications introduce social homogeneity that was absent before the new requirements; unintended but significant consequences can flow from any one of these alternations in the social composition of entrants to the field.

Occupational leaders find that as they construct a system of professional preparation, many difficult issues require resolution. What should the balance be, for example, between scientific and intuitive components in the curriculum? In fact, what sciences are relevant to their profession? In assessing a given candidate, how should they weigh his demonstration of practical skills versus his performance in academic work? How do they test those elusive personality characteristics they feel are so important in practice? Those preparing professionals seem almost compelled to find standard answers to such questions and to apply them to institution after institution; perhaps this drive for standardization stems from the professional's insistence that his special preparation is so significant—it is chiefly the training, after all, which separates the legitimate practitioner from the quack. Established professions have, however, managed to develop complex curricula featuring a sur-

prising amount of internal consistency, of unity in socialization experiences. But such standardization is possible, after all, where there is consensus on what the practitioner should do and how he should do it. Where the image of the practitioner's future work is diffuse or ambiguous or controversial, educators and senior practitioners have no criteria to assist them in arbitrating the many decisions they must make in building a system of professional preparation. Not knowing what kind of man they wish to produce, they cannot design a program with repetitive, consistent experiences intended to personify the professional ideal; lacking just such a unifying theme, the impact of their program is never quite strong enough.

Inducements for compliance in the established professions are many and subtle, and they range from internalization of ethical principles ("professional conscience") to controls built right into the career system and the distribution of rewards. Law and medicine, for example, test the young practitioner's technical competence and moral qualities at crucial points in the career—professional success is gained or lost largely in the context of colleague judgments.³ A long period of socialization follows the university period—young doctors and lawyers learn much, technically and otherwise, from the senior colleagues who oversee their early years in practice. This system of instruction, however, rests upon the consensus felt by those who rule the profession and influence the fates of young aspirants to high position. It also requires a highly effective system of communication to implement the values which underlie the judgments and influence the allocation of money, prestige and power rewards. The system defines who is in and who is outside the professional group; one knows, in short, who one's colleagues are.

This brief discussion may suggest some of the complexity connected with answering the questions cited earlier—the questions of entry, preparation and control which face every group seeking professional status. Many specific questions and issues must be resolved and similar answers adopted by members of the professional group; adoption implies a willingness to accept rules of the game which affect one's career and life fate. The group must agree on what is important to do and how it should be done in specific terms.

Where does school counseling stand in regard to these problems of professionalization? The current role of the counselor combines several different functions which are difficult to project into a unitary professional model. We shall examine the counselor's role in terms of three clusters of tasks which focus on different functions within the school's social organization. Scrutinizing each in turn (we shall begin with administrative functions in the counselor's role), we shall find that selection of any one of the three components as the core would lead in a different direction and would result in a distinctive type of professionalization.

II

The duties of guidance counselors generally include some activities which are administrative in function. Among these are situations where counselors route students to specific teachers or specific departments of the school. In so doing, they are performing an important executive function—using Parsons' phrase, they are allocating primary materials.⁴ Few matters influence a teacher's work or a department's status more deeply than the operation of the assignment system. Such decisions, by exerting an important influence on the technical level of work, are clearly managerial in nature, and since they require choices among members of that level, they must be made by persons either above it or apart from it. The counselor's decisions, unlike those made by most administrators, may be accompanied by esoteric techniques and special psychological knowledge, but the *functions* of such decisions, from the organizational point of view, are essentially administrative in nature.

Counselors may also engage in another administrative activity of some consequence—the maintenance of the school's system of order and discipline. The counselor who works with "behavior problems" referred by teachers and principal deals with an individual at any given moment; in acting with a succession of deviations from the school's normative order, however, counselors give that cultural system significant support. The techniques used do not matter very much; strong sanctions or subtle suasion, the ends served are the same. To uphold the school's norms is more than a simple police function. Problem behavior and its control invariably raise judicial issues and judicial decision-making requires the counselor to diagnose the likely effects of alternative decisions not only on the child but on the school as an organization. Continued concern with the viability of the organization is executive's work.

Schools and counselors differ in the importance they attach to these and other administrative aspects of the counselor's role. Some school districts, for example, consider the counselor's position the first rung on the administrative ladder; in these schools, the counselor is an administrator-in-training. (We find the same thing in some colleges and universities where the dean of students position is clearly linked with an administrative career.) Although many counselors may scorn the "administrative trivia" of their jobs, some spokesmen for guidance assign great weight to the administrative function. Shoben, for example, advocates a position for the counselor akin to that of the pathologist checking the surgeon's work, for the implementation of his suggestions would require the counselor to report, and therefore appraise, the effect of teachers and others on the climate of the school.⁵ The Meyerson and Michael viewpoint is more dramatically administrative, for their depiction of the counselor as a master pedagogical engineer leaves administrators little by

way of educational leadership in the school.⁶ Administrative functions are more than accidental elements in the counselor's role if school systems and professional spokesmen are prepared to give administration the central place in guidance work.

*It seems reasonable, in light of what we know about men and their work, to expect that a man's outlook will be heavily influenced by the repetitive problems and interactions he encounters on a day-to-day basis.*⁷ Much time spent in allocating students, for example, could lead to preoccupation with balancing the often conflicting values of fairness-justice and individual appropriateness. The assignment of students to a vocational program versus a college preparatory course, for example, is not a private affair—it involves the vital interests of students, their families, local employers, colleges, etc. The public nature of these decisions increases the decision-maker's concern with their legitimation and the result is that he places greater reliance on "objective" indicators of capability, interest and the like. Since such modes of thought require categories (bright versus dull, high versus low motivation, etc.), the counselor, no matter how profound his dedication to individuals, must constantly classify individual students into relevant groups. Such categorical considerations, although intended to clarify single decisions, introduce their own constraints. Once used and announced, any objective basis for allocation may be cited by others as justifying a similar decision. Willy-nilly, the counselor finds himself enmeshed in a round of precedents and judicial decisions; his actions, far from being free in each new instance, are constrained by an ever more complex set of policies and rules.

The counselor can become a man deeply committed to solving a recurrent series of complicated interpersonal as well as individual problems. As is true of the general school administrator, the counselor finds that he must become skilled in suggesting as well as implementing policy, and that he acts for the organization as it classifies and routes students into potentially different life careers. In all these matters, he must heed his official position, the wishes of legal superiors and the consequences decisions may have for the organization's ability to help future students. He is not only, as an employee, committed to working toward the goals of the organization, but his tasks make it difficult for him to deviate from the organization's means for meeting those goals. The counselor who allocates students has a relationship to the individual student which is not a pure dyadic transaction free of other entanglements. It must be filtered through a complex set of policies, relationships to various publics and organizational loyalties.

Protracted engagement in the work of order maintenance is also likely to lead to preoccupation with administrative issues. In this instance, the goals and means of the organization are especially important—the counselor is

acting to protect them, in fact, against the incursions of deviating students. It need not be true that the organization's interests and those of the student be always in conflict for this to be problematic; it is enough that where such a conflict arises, the counselor cannot disregard established school ways. The latter alternative is frequently ruled out by considerations of justice or expediency stemming from the visibility of disciplinary decisions. Furthermore, those responsible for upholding any established order sense the need for some minimum predictability in its rules if those rules are to have validity. School counselors know full well that continued "bending" of established school rules will, after a period of time, undermine the very relevance of the rule system. The law may need changing, but until changed, it is the law.

How would counseling be affected were it to professionalize around such administrative functions? This definition of the role would, of course, fix it clearly as an official position—it would place counselors as specialized administrators, sub-officials within the school hierarchy. Their special expertise might include such unique knowledge as recent advances in psychology, measurement, and peculiar skills (diagnosis, test administration and interpretation, the psychology of persuasion, etc.). The work, however, would not feature unique ends, for the counselor's proximate goals would not differ in any appreciable way from those of other functionaries in the school system. As with other administrators, one would expect him to demonstrate his loyalty to the organization by showing enthusiasm for its goals and respect for its ways. He would act inappropriately were he to put a personal conception of counseling (or one asserted primarily by the professional colleague group outside the organization) ahead of established school policy. He would, of course, work for changes he considered desirable, but at any given moment, his decisions would necessarily flow from pre-existing policy.

Research might reveal that counselors engaged in administrative functions vary in their relationships with general administrators and teachers, but I believe that assigning priority to this function necessarily involves distance in the counselor's interactions with students. The student, at least the perceptive student, will recognize the role the counselor plays and his possession of power to affect him, the student; rational behavior on his part, therefore, would dictate caution in relating to the counselor. (Where a student has a clear and specific purpose, in fact, rationality would include efforts to manipulate the counselor to assist in realization of that purpose.) The shrewd student would, at the very least, seek to make a "good impression" on the counselor, and such an orientation would generally discourage revelatory outbursts which might put him in an unfavorable light and tarnish the image he is attempting to project. The counselor, for his part, could not adopt the non-judgmental stance recommended for therapists. As a school official charged with imple-

menting specific policies, he could only pretend to no prior commitments were he willing to engage in hypocrisy. Holding power and authority, he would find it impossible to be "buddy" and "boss" simultaneously. Counselors playing administrative roles no doubt differ in some of the ways in which they interact with students, but like all who possess power, they sooner or later know the toughness of the boundary which separates those on different sides of an authority relationship.

Some may question the usefulness of counseling if it is primarily administrative in nature—why differentiate it at all under these circumstances? There is at least one answer to this query, although that answer does not dictate, in any way, the choice counselors should make in the years ahead. There seems little doubt that the advance of school administration will require some effective link to the world of applied psychology and will need persons skilled in the use of such knowledge in those areas where it is most relevant. Someone, no doubt, will play this role if school counselors do not; schools will not be able to ignore a large and important area of substantive knowledge in making rational provision for allocation, order maintenance, and allied matters. Leaders in the field of guidance may or may not choose to organize the field around administrative core tasks. Whatever their decision, there is a positive contribution of specialized knowledge and ability that rests in the application of modern psychology to the governance of public schools.

III

Wrenn and others have remarked that counselors currently perform many administrative and clerical duties.⁸ Yet we know better than to leap from this fact to the conclusion that the counselor's role is identical to that of the principal or any school official. Among the special attributes of the counselor's role is the private nature of his relationship with students and the dyadic setting within which it takes place; although the outcomes can be highly visible, the processes usually take place under conditions of greater privacy than found in principal or teacher dealings with students. Teachers may employ the rhetoric of individual instruction, but the ecology of their work offers them small opportunity for private interaction with students. Principals may see students privately, but the context is usually special and often involves "trouble." The counselor, however, routinely spends many hours in face-to-face conversation with students. The regularity of these private encounters has important repercussions for his role and could lead to a definition quite distinct from that we have been examining.

No social system works perfectly—all, to at least some extent, sacrifice in-

dividual interests in the operation of the whole. Schools are no exception, and as quasi-bureaucracies, they promulgate and enforce rules which do not always fit the individual's needs. The privacy and access which the counselor has in relating to students make it likely that he will become aware of such disjunctions more frequently than will other professionals in the school. In fact, the counselor's job title encourages students to define him as the logical person to hear their dissatisfactions. Undistracted by thirty other students needing attention, the counselor can more readily react by empathizing with the student before him; furthermore, counseling, as a position, probably attracts more persons who wish to "help" individuals, than do teaching or administration. This combination of factors—privacy, dyadic relationships, students frustrated by the organization, and counselors oriented to helping youngsters—can readily lead to counselor identification with beleaguered students. Such identification, were it to occur on a large scale, could bring about another logically possible formulation of the counselor role. Lacking a prior term, I shall call this function "advocacy."

The counselor who acts as advocate (specifically, as defendant's attorney) treats a given substantive complaint presented by a student as a serious matter. Where convinced that the complaint is valid, his inclination is to act, to press for a change in the situation which is problematic for the student. His eye is on reality problems, not on the emotional turbulence and distorted perceptions of the psychologically troubled student. Where this type of counselor finds a problem needing action, he is willing to go to bat for the student even where such attention might cause embarrassment to other professionals in the school. Although he needs and uses diagnostic skills in discerning valid from invalid complaints (in terms of *his* criteria), his is not the therapist's stance. His interest is in helping individual students cope effectively with the sometimes impersonal juggernaut of the school.

Significant changes in the organization of our schools would be necessary before the advocate function could become the central activity of school counselors. Though current role arrangements may permit the counselor to battle for some individual students, there is little evidence that regular conflict of this kind has become institutionalized in our school structure. If counselors are to engage in strenuous, prolonged advocacy in the interests of individual students, they will need protection to do so and a clear set of rules guiding their behavior and the behavior of those with whom they debate. Fighting the cause of the individual student could easily put the counselor in direct conflict with administrators and teachers. He would need a special license to perform this function, a license which defined his actions as professional, not personal, and which made it clear that he was not attacking the solidarity of the professional group. Mechanisms would have to be developed

which placed the counselor as a loyal member of the group justifiably engaged in opposition.⁹

Counseling organized around advocacy would not resemble the administrative formulation or, as indicated, the therapist conception. Persons engaged in this kind of role would, we imagine, begin to look like lawyers and stress the skills of pleading and analysis; we might even see the emergence of a kind of administrative law system in schools with formal arrangements for dispensing justice and arbitrating issues. Advocate counselors would probably emphasize such values as humanism, individualism, and concern themselves deeply with "the good of the child." One suspects they would leave to others such matters as the integrity of the organization and the logics of cost and efficiency. This kind of specialization, in other words, would include moral as well as technical specialization. The drive underlying the role would be the *relevant* treatment of the individual child, and the school would be held accountable for the human implications of its general procedures, rules, and policies. Nor is the stance that of the therapist who, in helping the student work through his problems, locates the problem as something within the student. To the advocate counselor, reality is a problem and students have the right to skilled intervention and support in getting the treatment most appropriate for them. The curriculum or the schedule—even an individual teacher—can be wrong.

We can speculate that were counseling to move in this direction, different skills and values would emerge to dominate the profession. Forensic abilities, the preparation of a "brief," skill in discriminating between neurotic and realistic complaints—these would probably emerge as valued abilities among such counselors. One would also expect counselors to develop an ideology consistent with their function—a set of beliefs stressing, in this instance, the importance of offsetting bureaucratic and standardizing forces in our schools. Research might center on such issues as how situational factors inhibit or encourage learning and personal growth, and on how individual variations affect response to different educational structures. The core ethic of this type of counselor would be one which placed clear priority on the responsibility of the counselor for the individual child.

Answers would have to be found for many complicated questions were counselors to move toward this conceptualization of their mission. What norms, for example, should govern the relationship between the counselor and the student he decides to assist? What powers, if any, should counselors be given to right wrongs they uncover? Should counselors intervene in family matters? If so, in what ways do their responsibilities differ from school social workers? To simply list these questions dramatizes the complexity involved in moving to this definition of the counselor's role. Yet one can question very

seriously whether American schools can make good on their affirmations of individualism in the years ahead unless specific arrangements are made to defend the individual student against powerful bureaucratizing forces. Will counselors be the ones to seize this responsibility as their core task?

IV

Those expert in the art and science of psychotherapy agree on the importance of the therapist-client relationship in influencing the outcome of the therapeutic transaction. Such authorities maintain that the client must be able to extend full and unquestioning trust in the integrity and ultimate sympathy of the counselor, and that the establishment of this trust is a primary task confronting the therapist. Yet few authors raise questions about the sociological context necessary for achieving this kind of relationship, for most discussions focus on the counselor's obligations to win trust without serious analysis of the constraints which can act on him from his broader role commitments. Imagine, however, the likelihood that a student called by the counselor for disciplining will perceive the complete absence of "explicit or implicit disapproval" stressed by van Kaam.¹⁰ What chance does the counselor have to convey the "warm and acceptant" feelings emphasized by Rogers where he is tightly bound by pre-existing policies which he must implement?¹¹ We know intuitively the impossibility of these juxtapositions yet we often ignore the situational and role prerequisites to effective psychotherapy.

It is clear that the trust relationship rests upon the client's feeling that his interests will come first, and that he is free, as client, to explore a variety of alternative actions, emotions, etc. without excessive moral constraint emanating from the therapist. (Some moral constraints will, of course, always exist.) Specifically, the client must never feel that the solutions he considers and assesses in association with the therapist will be screened in terms of unique organizational requirements. The therapist must be able to convince the client, legitimately, that he is assisting him and placing his interests before that of an employer, a school official, or a court.¹²

The therapist must also be free to follow the client's total interests and be in a position to explore many facets of his total life situation. Schools, for example, generally treat youngsters in their charge in terms of a specific status—that of "student." The existence of the latter status, paired as it is with several counter-statuses, limits the nature, extent and expression of interest school personnel show the individual youngster. But no troubled young person is ever, in his eyes, solely a student in School X—he possesses other statuses, crucial affiliations and concerns which transcend one particular organization. The person who would, through therapy, seek to help him explore

and understand his world must be willing to accompany him down many paths which lead away from his school experience. An externally imposed definition of psychological problems into "educational" or "non-educational" is hardly likely to coincide with the actuality of the youngster's inner experience—the therapist, in sum, must interact with the student as a total person.

This double imperative of therapy—the necessity to give priority to client interests and the need to relate to him in a total way—makes it extremely difficult to incorporate the therapeutic relationship into a pre-existing hierarchy of authority and formal status. Inasmuch as the therapist must enforce even limited aspects of the organization's special expectations, he cannot be certain to place the interests of the client first. Inasmuch as the therapist must limit his relationship to predesignated spheres of life, be they work, study or citizenship, he cannot engage himself with the object of his help as a whole person; yet to show interest in all relevant spheres of the client's life is to create suspicion that the organization is overreaching its boundaries. Almost all therapeutic relationships outside of mental institutions are *separated* from other critical facets of the person's round. Individual psychotherapy is, as well, frequently mediated by a fee-for-service arrangement which dramatizes the professional-client relationship, but even where the service is provided in a publicly-supported clinic, the actual therapy is conducted in a physically isolated setting and with no regular communication channels to other persons who figure prominently in the client's life. These structural arrangements are, it seems, not accidental—they relate closely to the double imperative we have examined.

What would be involved in establishing counseling in schools as essentially psychotherapeutic in nature? The counselor would have to be relieved of all administrative and semi-administrative responsibilities, and special mechanisms would be necessary to clarify his lack of organizational authority; he could not, as we noted earlier, expect full trust and revelatory behavior from students who perceived him as a person with influence over their daily school life. The counselor would have to show an interest in many sides of the student's life which are not currently part of the school's mandate. Nor would student expectations which are consistent with the therapist's stance accord with those sought by the advocate counselor. One wonders, in fact, just how he could be placed in the school's regular social structure since the usual ties and obligations of a school professional have disruptive potential for his therapeutic work. The problematic nature of his role would place him under a particular strain to justify his location in the school—he would be asked what he does in school that he could not do as well outside it.

To institutionalize therapy as the core function of the school counselor would require differentiation of his role from that of others engaged in psy-

chotherapeutic activities. Organizationally, one would expect school boards and top administrators to resist the therapeutic emphasis if it involves what they perceive as a major change in the overall function of the school. Creating a new profession of school counseling based on therapy would also be difficult if close examination revealed that school counselors feature the same skills, knowledge and social relationships needed in already established psychotherapeutic fields. Can school counselors develop a new and special conception of therapy which is clearly suited to the school situation and requires the location of the therapist on site?

Our era is one marked by a new realization of the significance of mental health among children as well as among adults. It is ironic that of the three functions we have examined, the psychotherapeutic formulation of the counselor's role would require the most extensive redefinition of that role and, indeed, of the mandate and organization of our public schools.

V

Selection of any one of the three functions we have reviewed as the core activity of school counselors would result in a different profession. Entry arrangements, professional training and career system would differ for administrative, advocate and therapist types of counseling. Guidance based on the administrative function, for example, would probably feature relatively late entry (our tests for leadership potential are not yet good enough to stand in for demonstrated capacity), a curriculum largely similar to that used in preparing school administrators and a career line which could logically terminate in the superintendency.

The preparation of advocates and therapists, however, would call for different persons to start with and different curricula in their training. Recruiting advocates would be challenging, as it would require persons with unusual intellectual abilities, commitment to individualistic values and the personality which would lead to effective work under conflict situations. Furthermore, a new career line would have to be developed to reward the core values of this new profession. But the recruitment, training and career routing of therapists, unless a new and profound differentiation of school therapy emerges, would be based on patterns already worked out in clinical psychology, psychiatry, and social work. Three different central functions would require three different sets of answers to questions facing all new professions.

If one major value of the author underlies this discussion, that value is the belief that counselors should select the function, or functions, they wish to

serve and build a structure appropriate to it or to them. There is a genuine risk that if they fail to do so, structural decisions (e.g., admission requirements, educational programs, job organization, etc.) will coerce functional outcomes. Counselors might, for example, recruit new members primarily from those established as teachers only to find that prior socialization makes it impossible to move toward an advocate or therapeutic definition of the role. On the other hand, university curricula might produce graduates imbued with an advocacy mission but no school in which to express it. In social affairs, function *can* follow structure.

The decisions facing counselors are difficult, manifold and time-consuming. As leaders toward a more refined and rich division-of-labor in schools, it is my hope that they will persist in efforts to find the set of duties which makes the maximum contribution of which they are capable. This will, I believe, require extended study and analysis not only of counseling but of other functions and groups within schools; counselors are not the only persons in schools who, concerned with their status, are considering important changes. We need thoughtful estimates of what services will be critical in the future and close analysis of the interlocking relationships of counselors and teachers and social workers and assistant principals. We will need much careful work, protracted discussion and, I suspect, considerable good will on the part of all if a more effective organization of our schools is to emerge.

Counselors must ask themselves what services they can best perform over the years ahead. Thorough and sensitive research, coupled with frank, widespread discussion is the only strategy that I can visualize which will lead to a reasonably harmonious and rational division-of-labor in our public schools. If school counselors wish to play a vital part in that emerging order, they had best heed Robert Park's advice to *another occupation* and find their craft before *they build their profession*.

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Revolutionary changes are rapidly altering traditional educational practices. Stressing the danger of accepting what may be oversimplified conceptions of students' motivation and learning, Dr. Friedlander examines three topics that are pivotal to contemporary movements for revision of curricula and teaching practice.

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A Psychologist's Second Thoughts on Concepts, Curiosity, and Discovery in Teaching and Learning*

When an experimental psychologist whose main interest is children's thinking and learning pays regular visits to an excellent school, he can only be grateful for the opportunity to observe skillful teachers do their work superbly well. Watching good teachers teach and smart children learn amid the daily stresses of the classroom is an abrasive test of the adequacy of his views about learning, thinking, and development. He must be grateful also for the opportunity to be an active participant in a professional field where the scope and pace of change are truly revolutionary. The visitor soon learns that the spirit of innovation is perhaps the most outstanding characteristic of the world of education today. Old methods are giving way to new at almost every

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hand, and even procedures once looked upon as virtually unalterable fixtures of modern school practice are subject to change or removal in response to the rising intensity of scholastic, fiscal, administrative, or social pressures.¹

It is clear that revolutionary changes are rapidly altering traditional practices related to curriculum content, classroom management, and basic views of students' motivation, attention, learning, and thinking. It is equally clear that the rapid pace of change carries with it the danger that innovations may become established as new orthodoxies in the absence of firm evidence that the new approaches can fulfill the expectations for improvement that they arouse. Of particular concern to the psychologist is the onset of new and possibly oversimplified orthodoxies in the realm of changing ideas about how students think, learn, and remember because he looks upon these topics as the most crucial area of the educational revolution. This view may not be simply a matter of the psychologist's professional bias. When we come to understand more about underlying mental processes in the acquisition of information and ideas, and when we can use this new understanding to promote the individual student's mastery of information and ideas with greater efficiency, then all other problems of education will become secondary to the wise exploitation of such knowledge about how learning actually occurs. But to the cautious psychologists whose job it is to study the complexities of the learning process there is little prospect that the problems of learning will be so thoroughly understood in our lifetimes. In the foreseeable future, teachers will continue to face the responsibility and the freedom to exercise judgment and make decisions about what and how to teach, with only limited means for gaining certain knowledge that their judgments are correct. And thus, as teachers, we will remain in the human condition of uncertainty.

Now, with the likelihood that this uncertainty will persist, I think that those of us who are concerned with teaching as a practical classroom art rather than as an administrative or a research abstraction must be prepared to exercise our most critical faculties so that we may be able to identify new ideas that truly deserve our serious attention, to weed out meretricious proposals that represent no real advance, and to be prepared to rescue good ideas from the distortions of fad and fashion that are a persistent plague in the world of education. If what we are experiencing is in fact a permanent revolution—and it seems probable that this is the case—then endless waves of new thoughts on teaching will surround and threaten to engulf us. If teachers are to survive professionally and maintain authority over their own enterprise amid the stresses and threats of chronic change, then they must take a prominent part in evaluating the flood of new ideas. It seems to me that classroom teachers, those who have the most direct contact with students at the level of thinking and learning, would make a grave mistake to leave it

entirely to others within the scholastic community to determine what innovations should be accepted and what rejected—just as it would be a mistake to accept all or reject all. Only when they themselves participate in the examination of proposed innovations can teachers combine the truly advantageous new ideas with their prior standards of work and judgment, and arrive at a personal sense of satisfaction that the new ways are in fact an improvement. Conversely, only when teachers participate in the process of evaluation can they feel really secure about rejecting innovations that others, perhaps with less demanding standards, have embraced.

What I would like to do here is try to identify and discuss several important ideas among the new approaches to teaching and learning that I think are fit topics for continuing analysis by teachers and others whose principal concern is with the private processes of growth and change that mark the progress of learning in the individual student. These are ideas that I think are in danger of becoming seriously distorted as they acquire the status of general principles in a new, and possibly misshapen, orthodoxy. This orthodoxy may receive the verbal obeisance of theorists, teachers, administrators, parents, and possibly even of students, while the original meaning and greatest thrust of these ideas become neglected or misused. What I want to do is to express some second thoughts on some first-rate ideas that have been offered by others. My purpose is not to assault or refute, as I will not deal with ideas that are so negative as to call for refutation. All I want to do is to say a few words of caution that may prevent some excellent notions on teaching and learning from becoming unexamined fixtures of sacred ritual. And in doing this I'd like first to affirm my acceptance of two related points that Jerome Bruner makes in his very valuable little book, *The Process of Education*.² The first of these is that any subject that is worth knowing about can, at some meaningful level, be made accessible to students at any age. The second is that any topic that deserves time and place in the curriculum must be a topic that can be expanded and elaborated so as to be worth the serious attention of a thoughtful adult.

IDEAS, FACTS AND OPERATIONS

The first topic I would like to discuss has to do with the relationship between major conceptual schemes that are the framework for whole towers of knowledge and the endless little individual instances of reality that are like bricks in the visible structure—between, if you will, an equation that states a general rule and the indefinitely large number of individual problems the equation can be used to solve. The interaction between general principles and specific instances is such a crucial relationship in any learning situation that obvious-

ly it cannot be discussed thoroughly in a few paragraphs, but there are several important aspects of it that can be stated without undue elaboration.

Bruner has most usefully pointed out the importance of establishing "structures" of knowledge so that the student can find meaningful relationships among comprehensive ideas, rather than have to struggle with countless facts in isolation. This is certainly a valuable lesson for the old-fashioned classroom where feats of memory in a conceptual vacuum were often taken as substitutes for successful learning. But in the healthy concern that has been shown for trying to discover and teach underlying conceptual structures in the school curriculum, I think that at times we may have become a bit cavalier and apologetic about how important it is for students to gain command over rudimentary facts and skills. I suspect that we have paid too little attention to the crucial role that facts and skills may play in the way a student masters a body of knowledge so as to comprehend its larger significance. In aiming for the student to understand the abstraction behind what we think he should learn (as if we always understood "the" rationale ourselves!), have we gone too far in deemphasizing the attainment of skillful performance, which in itself may be a principal means for attaining understanding?

For example, a dangerous weakness I perceive in some of the more favored of the new arithmetic materials for the primary grades is their inadequate attention to the matter of students working out illustrative and practice examples in the unfolding sequence of a group of related mathematical notions. At one school I know, the School Mathematics Study Group Grade Four curriculum was given an extended trial with bright students and capable teachers. Though the teachers were highly enthusiastic at first about the considerable advances of the SMSG program over traditional approaches to arithmetic, the problem of practice exercises was prominent among a number of serious faults found with Part 1 of the program. Related criticisms were that the SMSG program was often "inhumanly abstract" and bewilderingly remote from the children's experiences, their conceptual abilities, and their skill at performing numerical operations; that it lacked inherent devices to arouse motivation and provide a sense of accomplishment; and that it contained insufficient recapitulation of separate topics and transitions between topics. The teachers found it necessary to provide extensive supplementary material to secure adequate illustration and practice. In short, the principal difficulty with this curriculum, as with others among the current offering of revisions, appeared to lie in its concentration upon the selection and management of the conceptual structures of the subject matter, while paying insufficient attention to how and whether the students gain proficiency at what they are hopefully being taught.

What seems to be taken for granted is that students necessarily comprehend

and retain the rationale of the numerical operations and recognize the aptness of the concepts, hence "learning" them, simply as a result of the concepts' logical correctness and the internal consistency of their presentation. It appears to be assumed that the students' learning can be established with just a few examples that illustrate variant cases to which a single set of rules applies, and that generalizations obvious to an alert adult are obvious to the student, whose alertness is thought to be secured by the interest value of the subject matter.

These are assumptions that many psychologists would be quite unwilling to make. Their doubts would be supported by a large literature of experimental studies that indicate some of the complexities in the learning of new concepts³ and in the transfer or generalization of newly acquired concepts to related instances. Ausubel very clearly states that "abundant experimental research has confirmed the proposition that prior learnings are not transferable to new learning tasks unless they are first overlearned,"⁴ and he amply supports his statement with citations of experimental findings. Among the psychological and situational prerequisites for overlearning, retention, and transfer which he then goes on to specify are: adequate repetition and review, intratask and intertask diversification, differential practice on difficult components of a task, and feedback indicating correct or incorrect performance. In mathematics these are requirements that can be satisfied with imaginatively devised programs of structured practice that involve the learner in performing repeated operations within a given matrix of relationships. Yet in some of the new curricula it seems to be left almost for chance to determine how the goals of a learning sequence are to be attained in the sense that the student's thinking is reorganized on a new level, with concepts assimilated through experience so that a "rule" can be generalized from the familiar to unfamiliar cases.

What appears to be missing is the recognition that skill in performing operations may often be the learner's key to comprehending concepts. A major advantage of the Cuisenaire rods and the less well-known Podell abacus is that they provide mechanisms which make good use of the student's performance of repetitive manipulative operations in the acquisition of abstractions. The educational usefulness of devices requiring children to manipulate concrete objects, and then observe the consequences of their actions, is beginning to become widely recognized and applied in teaching the physical sciences, as well as mathematics, through such programs as the Elementary Science Study. The potential value of analogous teaching techniques in other curricular areas seems hardly to have been noted.

We are correct, I am sure, to fear that children may never attain understanding of their work if they are simply driven to parrot certain rote con-

binations as empty verbal tricks divorced from any rationale, and they may be frightened off from even making the attempt. But we should pay more attention to the possibility that recognition of concepts may be retroactive and can arise from facility with operations attained prior to the dawn of comprehension. As adults haven't we all had the experience of studying something difficult in a purely mechanical way—such as vocabulary and verb forms in a foreign language, mathematical formulae, and the like—only to begin to understand the underlying notions after an incubation period of days, months, or possibly years? Whatever value the learning may have had when it took place, it must be evident that the later comprehension could not have occurred without the remembered knowledge of previously acquired skills and facts. The same is very likely to be true for children. We have no clear demonstration that it is not.

At a recent symposium a number of distinguished investigators discussed the processes and strategies of children's thinking as they seek to learn to solve difficult reasoning problems.⁵ It was only at the very end of the meeting that a questioner commented on how important it is in reasoning to have prior knowledge of crucial facts in order to attain elegant or even workable solutions to the kinds of problems that were given as examples. Because adults frequently possess such bodies of information on an intuitive basis simply as a result of incidental learning in their extra years of life experience, they often overlook the fact that children are seldom as well equipped. Hence the role of fact as the raw material in children's thinking receives insufficient attention. In our quests for the communication of essential ideas in education I think we have tended to forget that ideas grow best in minds well nourished with organized facts, and that one of the goals of teaching and learning must be for students to accept the discipline of facts and skills as prerequisites for true understanding.

I am not suggesting that we must run right back to the classroom and create new drudgeries for the children to memorize so that twenty years from now they can have a grand series of insights that will reassure them that they learned something worthwhile in school. Of course education must be directed toward concepts and ideas, and it is depressing to find classrooms at any grade and in any subject where these are left out. But I am saying that we should re-examine our attitudes toward some of the mechanics of language, numbers, science, history, and literature. Where we conclude that certain mechanical skills and rote memory (dare I use that term?) are truly basic to the structure of what we want to teach, then we should go ahead and teach them without apology. And if we go about our teaching properly, devoting our ingenuity to finding ways to help students master what our best professional judgment deems essential, then we should expect the children to learn. History teachers

have been put on the defensive about making students recognize and remember significant dates. They have been urged to focus on more important topics, on "basic trends." Yet how can a student be said to have any worthwhile comprehension of a historical trend if he does not recall, virtually automatically, that there was a lapse of almost 15 years during which half of a new generation assumed the role of citizens, between Paul Revere's ride and George Washington's inauguration as first President of the United States? In short, from kindergarten through graduate school I would have serious reservations about a student's grasp of a concept if he could not exemplify it quite fluently with a factual recitation or an able demonstration.

CURIOSITY AND LEARNING

I think the notion has begun to circulate that children in their natural state are steady, burning flames of curiosity, and that their desire to know new things compares almost to the insistence of the hunger drive. The early contemporary investigators of curiosity and exploratory behavior as important psychological constructs gave impetus to this view about a decade ago when they spoke of curiosity motivation and curiosity behavior with the same terminology generally used in discussions of the primary drives based on physiological needs.^{6,7,8} The early experiments were performed with chimpanzees and rhesus monkeys as subjects, but the implications were considered to be profound for the highest primates also. Investigators whose interest lay mainly with human behavior rapidly began to make use of the new conceptions of motivational value of curiosity rewards directly into an educational context in his first paper on "teaching machines." He spoke of the reinforcing effect of any event resulting from the child's own activity that "feeds back significant changes in the environment," and added, "The sheer control of nature is itself reinforcing."¹¹ Thus it comes as no surprise to have those who are primarily educators speaking in terms of children's "joy in the search for knowledge" and their "excitement in learning about the workings of the physical universe,"¹² as if these were unambiguous principles of behavior that can be counted upon to provide enduring impetus for students' performance in the classroom. From statements such as these that increasingly occur in the literature on children's motivation the teacher is led to infer a) that children almost uniformly have powerful cravings to learn; b) that the teacher's real function is simply to get the pupils started in the right direction and then stand aside to avoid being trampled in the stampede to acquire knowledge; and c) that if otherwise "normal" children don't follow this pattern the teacher is doing something wrong.

I doubt very much whether most teachers' daily experience matches this hyperbolic view of children's love of learning, and I would like now to comment on some other aspects of children's curiosity that have not been sufficiently recognized.

First of all, while curiosity is undoubtedly a significant component of children's relationship with their world, it may operate only marginally as a motivator and incentive for academic learning. This is so for a number of reasons.

1. Curiosity in older as well as in younger children is often very unsystematic and non-cumulative, while school learning must be systematic and cumulative if it is to have value.

2. Children's curiosity may be very immediate and very easily satisfied, and the child may seek to avoid the pedagogical manipulation of his desire to find out something. Let me give an example of such avoidance from a bright eight-year old acquaintance. Teachers have told me his attitude is not untypical. "Now listen here, I've got a question and I want you to answer it. Don't just give me back another question like you and the science teacher always do. I just want to know, why doesn't an airplane fly sideways?" The boy did not want a great learning experience or a Socratic dialogue. He wanted no more than an answer to his specific question, preferably fast and to the point. This was not curiosity that could be manipulated for instructional purposes. I know because I tried, and failed.

3. Children's curiosity may be as readily satisfied by incorrect or partial information as by true or complete information. The child is not necessarily a critic with his curiosity. His interest in a topic may be completely satisfied and quickly fall to zero with a single statement that can be either a pearl of wisdom or the most flagrant fallacy.

4. Children's curiosity may be strongest with respect to issues that are not necessarily the proper concern of the school, the teacher, or the classroom. Here we get into the psychodynamics of curiosity related to Freudian concepts that may or may not be associated with unconscious promptings to learn about sexual matters, the family constellation, and the child's own prospective role in adult aspects of sexual and family relationships. Without going into detail I think we should recognize that a child's curiosity may be at its peak on such topics as these. One can take Freud or leave him alone according to one's tastes and interests, but most psychologists by now pretty well agree that children from kindergarten age on upward have very strong drives to learn about babies, love, marriage, and so forth. With increasing age the pressure from this aspect of curiosity increases in an exponential manner, though not always visibly to superficial observation. I think it represents some sort of a triumph of the acculturated mechanisms of psychological suppression

that adolescents can think, or pretend to think, about anything else. This is especially so in a culture like ours that suffers such acute ambivalence about sexuality, with notions of display and permissiveness at war with opposing notions of secretiveness and restriction—and with the adolescents caught squarely in the middle of the conflict.

These cultural, social, and personal conflicts have particular bearing on the matter of scholastic motivation. It is a common misunderstanding that the suppression or denial of curiosity on these sensitive topics means that the energies thus contained will necessarily be sublimated, and reappear in a more socially and scholastically acceptable form. Quite the reverse is just as likely to occur. Denial of the unacceptable curiosity can readily generalize to denial, suppression, and passivity with respect to psychodynamically neutral scholastic topics. We should not be surprised that many children find it difficult to transfer their interests and curiosities to other topics of much lower immediacy when the questions that really concern and perturb them are left unanswered, or even unasked.

5. Below the level at which students are ready to work with considerable independence it is difficult to manage regular classrooms to make maximum use of curiosity incentives and rewards for each individual student. This is a separate problem of classroom management, but we can note here briefly that spontaneous curiosity tends to arise in individualistic and fragmented ways that might be characterized by very few points of common interest to a class as a whole. This is especially true for younger children. It would be very difficult, though I won't say impossible, for even a very skillful teacher to elicit and give appropriate responses to a heavy traffic flow of spontaneous expressions of curiosity in active study groups with more than a half dozen students. Yet if inquiries prompted by curiosity are not rapidly refined in teacher-student (or student-student) dialogue and given appropriate reply, interest in a given topic quickly fades and turns in other directions.

6. As a personal trait curiosity is distinguished by a broad range of individual differences. Some children have lots of it and some have little.¹³ While there are suggestions that curiosity is correlated with intelligence and information already acquired, the association of these characteristics is by no means across the board. Bright children may have more of it and dull children less of it, but the opposite may frequently occur. On these grounds alone it would appear highly doubtful that a comprehensive view of teaching and learning could be based successfully on the blanket assumption that children just naturally want to learn or can easily be induced to learn the things we want to teach them. For some children, in fact, new knowledge may be extremely threatening (in ways we may or may not perceive) and not be all rewarding. It is not uncommon to find children who actively suppress an

interest in learning new things, or who suppress giving evidence of knowing what they may in fact have learned. It would be incorrect to classify such children with those who are seriously disturbed emotionally, though their academic performance may be dangerously maladaptive in a culture that attaches great importance to school learning.¹⁴ These children are our under-achievers and they present perhaps the greatest frustration to even the most able teacher. When we recognize how large a portion of our student population falls into this troublesome category—including many who possess all the prerequisites for scholastic success—we are reminded anew that it would be dangerous to look upon the force of curiosity as a universal motivator for students.

To summarize this topic, I don't want to appear to deny the potent force of the desire to learn new things as an effective agent in learning for some children at some times with some kinds of information. But considering the qualifications mentioned here I think we must view with extreme caution the notion that curiosity and the spontaneous desire to learn can by themselves generate the disciplined attention and motivation that are required if students are to master the increasing content of expanding school curricula. We are probably on safer ground for the present if we continue to make careful classroom use of such extrinsic incentive and reward systems as approval, the achievement motive, social support from the teacher as well as from peers, and possibly even the device of special privileges, in addition to the intrinsically rewarding effect of learning for its own sake.

DISCOVERY AND LEARNING

Educational and psychological views on the meaning of the term "discovery" are in substantial agreement. Bruner calls discovery, "a matter of rearranging or transforming evidence in such a way that one is enabled to go beyond the evidence so reassembled to additional new insights."¹⁵ That definition incorporates Dewey's statement that the student's experiences with the raw material of what is to be learned generate data, from which he may then proceed to discover ideas,¹⁶ and Wertheimer's conclusion that productivity in thinking and learning rises out of the perceptual functions of grouping, centering, and reorganizing the objective properties of a problem situation.¹⁷ When these notions are applied to the classroom we may say that a body of facts or ideas is presented so that the student is led to make correct inferences about unstated facts or ideas by momentum, as it were, of information that has already been presented. Hopefully, the student is challenged to find out for himself the generalizations or inferences that the subject matter contains as the product of his own thinking and manipulation of basic facts. He plays an active,

thoughtful role in his own learning. The student is not simply a receptacle for a set of conclusions that have been arrived at by someone else. When the process works most effectively discoveries become sequential and cumulative, with one insight or generalization leading to others as new material is presented, each adding a new stage of breadth or depth to the student's knowledge and comprehension.

There are two major reasons why this is thought of as an extremely powerful mode of learning. First, it capitalizes on the very strong reward value of bringing order, clarity, and meaning to experiences that were previously disorderly. Orderliness is gratifying, while meaninglessness that circumstance forces us to cope with is extremely distasteful. The child is thought to learn and understand because it is rewarding for him to do so when the learning provides systematic and coherent patterns of organization between items of new information and some recognizable larger scheme. Second, teaching by means of discoveries involves the student as an active participant in his own instruction. He cannot be a discoverer and at the same time be a passive observer. Because of his own participation in developing what is revealed or resolved in the discovery process we expect that the student will retain his new knowledge more completely than he would retain a system of facts and ideas imposed upon him from the outside.

Now, here are some second thoughts on discovery as a technique for classroom instruction, expressed in terms of very specific problems. First there is the joint problem of direction and correctness of discovery: do discoveries necessarily lead to productive findings and resolutions? It is usually assumed that they do. Of course we know that some voyages of exploration are bound to fail and that even failure can have its values. But are we really prepared to face up to the frequency with which failure may occur—and the degree of confusion such failures can generate? However well structured the preliminary material may be from which the discoveries are to be launched, there is an indefinitely large number of opportunities for derailing a productive train of thought. The student's thinking often may be drawn off in directions that involve needless complications of the learning process. Theorists have a tendency to cite only the successful instances of a technique, but Wertheimer presents numerous instances of failures in thinking that suggest how difficult indeed it may be to attain productivity with relatively unstructured problem materials.

I once saw an excellent example of such a difficulty in a first grade reading class. A boy "discovered" that the phonetic value of the soft *c*, as in "cent," was determined by whether it was a capital or a small letter, not by its relationship to the associated vowel, as the teacher was leading the class to recognize. In defending his mistake when the teacher gently challenged him

for an explanation the boy followed a not uncommon pattern of children's thinking by citing an irrelevant, minimal cue as evidence for his claim. As they were written on the blackboard the letters of the exercise were not capital and lower case, as he insisted. Their size was virtually identical. Not only was the boy wrong, there was no objective basis on which he could have been right. But his great insight gave him the full Brunerian glow of satisfaction at having scaled a great peak of learning. He clung to the propriety of his discovery almost stubbornly when the teacher offered him an "escape route" to the correct differentiation. Finally he seemed to accept the teacher's correction, but only, I think, because it was perceptively offered.

That brief episode alerted me to watch for other "discoveries" that lead to confusing outcomes, and I soon found that it does not take many hours of classroom observing to see frequent mistakes of this kind, mistakes that often go uncorrected. When teachers seek to capitalize on the students' reasoning, errors of fact, of perception, or of association can lead to hopelessly chaotic chains of mistaken inferences and deductions. I also found that when, as often occurs, the teacher has understandable difficulty identifying the seemingly inscrutable logical or psychological juncture where the student's thoughts have jumped the rails, the consequence is likely to be quite justified discomfiture on the teacher's part and useless disruption of the lesson for the rest of the class. Such failures may be the price of progress, but we should not close our eyes to how high that price may be.

Our second problem concerns the very important matter of retention—memory of what has been learned, or at least recognized. I think we must acknowledge that the problem of retention is a serious one that presents two separate aspects when we seek to teach by the discovery method. First, I do not know of any extensive "hard" evidence that the insights which the student develops on his own have a higher likelihood of being remembered than insights he learns about from others, although we base much of our faith in the discovery method of teaching on the assumption that this is true. The contradictory evidence cited at a recent symposium on learning research in education¹⁸ tends to strengthen the view that we are well advised to be cautious on this point. Findings related to discovery and self-directed study were highly inconclusive.

Anecdotal evidence from teachers who have used discovery methods in their classrooms often bears out the inconclusive research results. I have heard teachers say that many crucial notions are frequently "discovered" again and again and again by the same student—each time with just about the same naive glow of satisfaction, as if the thought had never before occurred either to the student or to any other member of the human race.

All of us have probably experienced vivid examples of how quickly and

completely we can forget important thoughts that are genuinely valuable if they first pop into our heads when it is inconvenient to write them down or otherwise embed them securely in some context of larger meaning. The same kind of effortless forgetting is just as likely to occur in the case of children's learning achieved by insight and discovery. *We should take account of the prospect that discovery of a crucial relationship or an essential fact is really only the first phase of the kind of assimilative learning that we seek for ourselves and our students.* The student's pleasure at going beyond the evidence to perceive a truth is likely to be little more than a passing fancy if the experience is not followed by a process of synthesizing in which the new idea or fact is incorporated into a systematic context. It is at this point of the learning process that the teacher can play what is perhaps his most important and satisfying role, for the unaided student is frequently at a loss to establish the necessary synthesis on his own. It is here that the teacher, with his broader knowledge and richer store of related references, can help the student refine the significance of what he has apprehended on his own and help him construct an orderly scheme of meaning in which the new knowledge can take its proper place. Without these refining and conserving operations that can stem from the teacher's guidance the discovery itself is likely to be of limited value. Promoting the concept of discovery alone as a method of instruction is likely to be a deceptive and a vain pursuit because it is incomplete. We should pay as much attention to the question of consolidating the student's new insights as to methods for eliciting these insights. As far as I am aware, neither psychologists nor educators have dealt with this second stage problem adequately in terms of the complex, multiple dialogues that take place in a productive classroom.

The other aspect of retention we must consider touches upon fundamental problems of memory as a psychobiological process. On the basis of mounting bodies of research it now seems incontrovertibly clear that memory is a product of selective changes of electrical and chemical functions in the brain, even though it is not yet possible to say exactly how these changes operate and how the patterns of selectivity are determined.¹⁹ This is not a topic suited for extensive discussion here other than to note that the salience of an experience in memory is more likely to be determined by the focal attention associated with the experience and the distribution of neurochemical energy related to this attention than by the objective "correctness" of the thoughts.²⁰ It is a long leap from the neurochemical laboratory to the classroom but it may be safe to infer that the boy who attained his splendid discovery about the capital and lower case *c* will have more abiding memories of his mistaken thoughts to which a high level of attention and energy were attached than of the teacher's neat correction that he accepted without visible signs of activation.²¹ If the

energy, attention, and self-involvement associated with sequences of thoughts *are* as powerful as or more powerful than objective correctness in determining memory, then we must be especially cautious about a teaching method that encourages highly activated student participation at the possible expense of searching and accurate analysis.

Pursuing the matter of correctness and incorrectness in another direction brings us again to the problem of children's defenselessness against errors of logic and reasoning. Even with the best possible structuring of the preliminary material from which discoveries are to be made, students' insights may be circular, repetitious, or simply inane. Such errors represent closed or idiosyncratic systems of association that quickly lose contact with the important aspects of the original problem and goal in learning—unless the teacher's perceptive and goal-directed intervention keeps thinking on a productive track. No experienced teacher needs to be told how quickly a group study project can collapse into an empty waste of chatter nor how quickly a student's independent investigations can lead him into bogs of confusion. This is especially true of children at lower ages, but we mustn't underestimate the ease with which even our brighter, older students can go astray, either accidentally or to fulfill some subtle purpose.

We know that younger children's thinking does not operate efficiently at the level of orderly and systematic sequences that we hope it will attain eventually, yet we tend to overlook the significance of their limitations when we propose the goal that they should have enhanced opportunities to work productively on their own. The restrictions that logic imposes on possibility and reality are usually intuitively known to adults, even though they may not understand exactly why certain relationships are impossible or inevitable. Because his awareness of logical constraints and prerequisites are at an intuitive level, the adult often fails to recognize the severe limitations on even bright children's ability to carry out their thinking and their transactions with the environment within the constraints of orderly thought. Children sometimes make startlingly shrewd observations, so we tend to overlook how infrequently and inconsistently this occurs. The acculturated adult can accept the conclusions of a syllogism, even if he has no prior knowledge about the terms, but below the age of about 11 or 12, and/or in the absence of prior training, attempts at syllogistic and other kinds of operational thinking with children are simply an invitation to endless unresolved puzzlement or controversy. Even when we are trying to note their logical errors we are often blind to the many ways that children innocently violate rules of orderly thinking, rules that have become second nature to adults. Yet it is one of our principal teaching missions to help children accept, learn, and obey rules of logical thinking so that they can judge the adequacy of their own thoughts,

without needlessly confining their imagination. While we may admire and wish to preserve children's freshness and ingenuity in making productive, unconventional associations, there may be a tendency to romanticize and overestimate the element of productivity while underestimating how mistakes in logic often generate dense fogs of frustrating perplexities in children's mental lives. Such perplexity can seriously inhibit the child's ability to take advantage of opportunities to learn by insight and discovery.

Next in our reconsideration of discovery learning we come to the very practical problems of individual differences within and partial participation among the classroom group. On the score of individual differences we must consider the difference between intuitive and linear thinking. Discovery is often thought of as a kind of intuitive flair. For those who have the flair new combinations of thought seem to be generated almost spontaneously without a conspicuous chain of logical antecedents. We should recognize that such an intuitive flair, while valuable, is not necessarily the only effective mode for dealing with unfamiliar, partially familiar, incomplete, or disordered information. In other words, discovery may operate in different ways in different people, and it is not clear that one mode is necessarily better than another, or associated with higher levels of capability and performance. In a situation of incomplete information some students may quickly recognize a broad range of relevant (or irrelevant) facts and rapidly generate, test, reject, modify, and appropriately or inappropriately accept tentative solutions. We would call this intuitive performance. Other students might proceed slowly, examining separate lines of possibilities in a rational or irrational but nevertheless sequential plan of search characterized by systematic, step by step examination. We would call this kind of performance linear analysis. Either might lead to productive or unproductive solutions, and either might constitute a valuable opportunity for learning or a senseless exercise in irrelevance, regardless of whether the solution were right or wrong.

It is probable, but by no means certain, that each of these approaches represents a distinctive mode of thinking and performance. Neisser has identified two modes of thought that seem comparable to this distinction as "sequential" and "multiple" processes,²² and recent studies by Kagan suggest that these different modes of thinking may be related to more or less stable personality dimensions which he labels "analytic" and "reflective" attitudes.²³ (Both of these approaches to modes and styles of thinking are essentially psychological designations for a differentiation of thinking performance that Trager and Hall termed "line integration" and "point integration" in a cultural-political context.²⁴) It is also probable that any classroom contains students whose styles of thinking are dominated by one or the other cluster of traits. It is further probable that a teaching method keyed especially to one set of traits

is likely to generate frustrations, annoyance, and difficulties for students whose style of thinking is oriented in the other direction. Perhaps the present premium placed on intuitive flair is simply an effort to redress a balance. In the past classrooms have been dominated by teaching methods that put special emphasis on linear sequence, a method that can quickly lead to monotony and tedium. If we are seeking to purge the sin of tedium from classrooms by introducing new methods we must be careful not to think that the prior emphasis we may wish simply to readjust is necessarily an error to be expunged. Linear analysis as a mode of teaching may well become colorless or authoritarian in the hands of a teacher who is bored, uninformed, or domineering, or with students who are inordinately passive, but it may also possess distinct benefits such as order and clarity that we should seek to preserve and enhance. A prerequisite for fruitful, intuitive discoveries might well be linear programs on how to make them. Gagné's findings in studies of teaching mathematics and science suggest the values to be gained from such a combined approach.^{25,26}

Though the matter of non-participation by significant and possibly substantial portions of a class group is primarily an issue of classroom management rather than a psychological problem, the topic deserves some mention here in view of the prospect that only some members of a class are likely to be fruitful discoverers. It is a particularly insidious danger that a teacher might fall into the pattern of rushing buoyantly along on sequences of interlocking cascades of thought and inquiry with just the handful of students who are able to fly along on the same journey. The classroom observer sees what the teacher seldom seems to notice—that only a few students appear to be attentive and involved when the teacher is working with his greatest enthusiasm. What may be an exhilarating experience for the teacher and a few responsive students might also be a bleak disservice to the majority of the class. The delights of inspired improvisation are sometimes gained at the expense of an orderly survey of a specific and well-defined area of information. The real danger here lies in the risk of overestimating the advantage of the benefits for the few while underestimating the cost in lost communication with the many.

Another second thought on the discovery method in teaching has to do with the problem of relying on the student to be his own critic. We can't reasonably expect children, the younger ones especially, to be productive, imaginative, and exploratory at the same time that we want them to be reflective and evaluative. Yet we *do* want them to be reflective and evaluative. We don't want to throw away the more sober values in our pursuit of spontaneity, and we should recognize that we are involved in a contradiction that is frequently overlooked. The contradiction revolves about the opposing abilities required

to generate new ideas and new combinations of thought and then subject these innovations to an almost simultaneous series of tests and evaluations so as to accept those that fit and reject those that do not. Combining both skills is a characteristic of exceptionally mature and efficient thinking that very few of us do at all well. When we expect students to offer their own hypotheses in a learning situation we should be prepared to find that some are dominated by the critical function and the inhibiting fear of being wrong while others are likely to be highly productive, but too careless in their regard for whether their own ideas are useful and appropriate. Kagan's studies of children's response impulsivity and reflectiveness present an experimental approach to the examination of cognitive and affective processes that influence what might be termed productive and editorial performance.²⁷ Stylistic attributes of such performance apparently represent relatively enduring traits, and it is probable that they are not easily modified simply by a teacher's verbal admonition to a student either to think more before speaking or to speak up more freely. What is important here is the recognition that these opposing behavior tendencies present a genuine problem. We should not expect to elicit a rich flow of meaningful hypotheses and, simultaneously, careful scrutiny of the hypotheses simply because a theory of instruction tells us they are desirable. Once this problem is recognized, practical measures to cope with it may be relatively simple to devise.

Finally, in this array of second thoughts, there is the problem of ambiguity. This is possibly the most subtle of the problems related to making use of the child's own attempts to discover and resolve stable, systematic, and meaningful patterns of thought relationships from a stock of intellectual material that is incomplete or disorderly. By ambiguity in a teaching and learning situation I mean the condition in which a given fact or set of facts may have one meaning, several meanings, or no meaning. Ambiguity raises troublesome problems for learning, both when we mean to avoid it and when we try to make use of it as a consciously selected teaching device.

In the first instance sequences of information may be prepared so as to point in a given direction, with the expectation that the students will follow implicit and explicit guidelines in order to arrive at an intended destination. But as we have seen, what is clear and unambiguous to the teacher is not always clear to the students, and different students may make different and quite contrary inferences from a single body of facts. This problem is always likely to arise, of course, in any kind of communication, but it is particularly likely to arise, and it is particularly damaging, in an insufficiently structured and ill-defined learning sequence that leads toward open-ended uncertainty rather than a demonstrable goal. In preparing materials designed to lead toward students' recognition of specific relationships it is very important that the

given cues and prompts be clear and unambiguous, however incomplete it is purposely intended for them to be. Even when, or perhaps especially when, the purpose of a lesson is to demonstrate unpredictable events or relationships, it is essential that axioms and examples be very explicit. I think there is a tendency to expect that students will somehow discover what we know and what we want them to learn if we just let them thrash around with a few good cues to get started and a large body of facts to draw from. This may be a suitable approach for a problem in independent research for the most advanced students, but there must be serious questioning whether this constitutes a valid method of instruction at the beginning stages of learning any new topic.

In the second instance of ambiguity the teacher may want the student to make use of two or more ways of handling a problem or find more than one solution using a single set of data in order to demonstrate that some kinds of events and relationships are unpredictable or are not confined to a single sequence of explanation. In such instances I think there is a particular necessity to make it clear, especially for the younger students, that multiplicity is in itself a rule that describes the situation in question. The comprehension of a multiple determination of events involves very sophisticated thinking that even the finest minds could barely cope with until quite recently. Even the great philosophers whom we revere in our intellectual tradition tended to think largely in terms of first causes and final causes, as if these were unitary. If we recognize how as adults we tend to seek simple, single explanations for such perplexities as the weather, the cold war, the financial situation, physical health, and eliminating crabgrass, we may be more realistic in our assessment of how much ambiguity and uncertainty our students are prepared to handle. For the teacher who knows the acceptable goal or several possible goals of a sequence of intended discoveries, the uncertainty and tension aroused by an ambiguous pattern of facts may not seem at all distressing. But for the student who does not immediately perceive an effective route for his thoughts to follow, the difficulty of the problem may be so great as to lead him to withdraw from it altogether, rather than act as a challenge to spur him on.

It would be incorrect to state that teaching methods that compel the student to try to resolve ambiguity and uncertainty are necessarily dangerous or wrong. However, I do think we should be careful to structure prospective discoveries in order to keep uncertainty and ambiguity within manageable bounds. We should not commit the error of assuming that students' grasp of complexity and of what is and what is not possible—the restrictions by which ambiguity can be held within tolerable limits—is necessarily equal to our own. The crux of the matter is to seek just the right level of uncertainty that acts as a stimulant to thought but does not tip the balance and become a

threat to competence. This is where the teacher is thrown back upon his own judgment, for there are no unambiguous rules to follow.

CONCLUSION

From all that I have said that is critical one might conclude that I am somehow "against" teaching that searches for larger concepts instead of fixating on isolated facts, that seeks to stimulate and satisfy students' curiosity, and that attempts to provide structures within which students can find for themselves important facts and relationships in the material they are to learn. That false conclusion would be a misunderstanding of my purpose in raising all the difficulties I have discussed. My purpose was to try to indicate the danger that these very, very important ideas about teaching and learning might lose their potency due to oversimplification, misunderstanding, empty ritualistic application, and the frustrated disappointment among both teachers and students that would be sure to follow. By examining some of the unsettled problems associated with these ideas we can approach them with greater clarity, use informed judgment to avoid pitfalls, and gain maximum advantage where these new approaches can be put to use effectively.

My true conclusion is that the factor of judgment is crucial. When we recognize the complications of the teaching and learning process, with all its delicate balances between freedom and discipline, between imagination and critique, between fact and concept, and between memory and forgetting, it hardly seems likely that any one method or formula can fit all cases. Only the wise intervention of the teacher's judgment can hold these shifting stresses in equilibrium.

In these terms I think it is clear that students need good teachers as much now, possibly more, than ever before. Formerly, a teacher could perform as simply a passive agent, acquiescently dispensing pre-packaged bundles of skills and information that had the approval of tradition. This is no longer possible. In order to fulfill his role successfully the modern teacher must play an active part in deciding what and how to teach, adapting each decision to both long range objectives and to the needs of the moment as the learner comes to understand what he previously did not comprehend.

Some observers see independent study, programed instruction, educational TV, team teaching, and other elements of the scholastic upheaval as threats to the teacher's status and importance. I emphatically disagree. Instead of being displaced by the new accoutrements of education, the teacher has increased opportunities to shape the growth of his students' minds. The teacher does not lose status from the new recognition of the autonomy of the student's thoughts. He assumes an increasingly significant posture when he ad-

vances beyond the role of an information dispenser—which TV, programed texts, and other devices can do with greater patience. In his new role the teacher gains freedom to devote more energy and attention to sensing the student's changing needs and guiding him through the trials and dependencies that inevitably accompany the uncertainties of attaining intellectual maturity. The teacher's guidance and the student's attainment are uniquely personal. Where both truly succeed it is to the teacher's credit for serving as a worthy model of rational intelligence, effectively and judiciously in action.

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Can creativity be taught? In recent years this question has received increasing attention from educators and others. Professor Brown presents a method of teaching creativity through the development of a theory of "sub-selves" within the individual's total personality structure.

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A Second Study in the Teaching of Creativity

"Creativity is a gift." Like good looks or wealthy parents, creativity is often thought to be something one has or has not. Although occasionally there is a grudging admission that possibly creativity can be learned, this learning process is believed to be an arduous one, usually encompassing a magnificent total change in both behavior and behavior's antecedent, personality.

Here we posit that creativity can be learned through the use of a strategy that contrasts with the grand attack aimed at overall change. Creativity can be taught even if not in a way that permeates for all time every dimension of the subject's personality. Instead, attempts are made in this study to develop a personality structure, a "sub-self" built around a focus on creativity. A "creativity symbol," part of the focus on creativity, is used to trigger the creative sub-self. When triggered from the welter of total personality or total self, the newly developed creative sub-self emerges as the major and crucial rubric which governs the functioning of the subject. Antithetical or inappropriate elements, patterns, or sub-selves within the subject's total personality fade into background and have for the time being little or no influence on the individual's perceiving or consequent behavior. A hypothesis of the study is that when a triggered creative sub-self is thus brought from ground into figure—in terms of Gestalt psychology—the subject's perceptual frame of reference will be altered significantly so that the subject will per-

ceive in a way similar to populations previously designated by others as creative, a designation which is based on evaluations of productivity.

The study is a replication of an original investigation reported at the 1963 meeting of the American Educational Research Association. In the first study an attempt was made to develop what was then called an aspect of the total self built around a number of creativity symbols. When triggered through the use of one of the symbols, this aspect of self would be capable of acting from a creative frame of reference. The procedure was carried on with an experimental group in a semester university course required of junior elementary education majors. Two additional groups were used to control for both the experimental method and instructor variable. A detailed description of both the experimental and control group procedures may be found in Brown (1965). Analysis of covariance comparing the test results of the experimental group with the control groups resulted in significant F values. The second study is also an amplification of the original study. In addition to further theoretical treatment in the procedure, there are attempts at developing a non-creative sub-self along with a creative sub-self which, when triggered, will come into figure and have a perceptual frame of reference in many ways antithetical to that of the creative sub-self. This is similarly crystallized about a non-creativity symbol which can be used as a trigger for the sub-self. It is hypothesized that the subjects will then perceive in a manner similar to populations designated as non-creative, extrapolated from known creative and "normal" populations. The second study also makes use of additional instruments for measuring perceptual alteration.

In this study the total personality is equated with what Combs and Snygg (1959) call the phenomenal self. This includes "those aspects of the perceptual field to which we refer when we say 'I' or 'me.'" The dynamic nature of the phenomenal self is a consequence of continual modifications in the figure-ground relationship. Behavior at the instant of action is solely determined by the perceptions of the individual. Figure-ground relationships govern the process of differentiation, the searching of one's perceptual field or perceived universe.

As the individual finds himself in a different role or situation and as these roles and situations become familiar, a relatively predictable corresponding organization of the phenomenal self takes place. This organization is that which the individual has found appropriate for the role or situation. As the organization becomes more and more crystallized and predictable, it can be conceptualized as a sub-self, brought, in a sense, from ground into figure within the total phenomenal self. The total phenomenal self, then, contains a multitude of sub-selves. These all overlap to some extent. The degree of overlap is probably influenced by similarity between the determining roles

or situations perceived by the individual. The total self may be thought of as a kind of multi-dimensional psychological mosaic which continually changes in characteristics and organization as sub-selves, moving from ground to figure, replace other sub-selves, only to fade in turn into ground as each is itself replaced.

The preconscious is defined by Kubie (1961) as the level of mentation or symbolic process whose function is to express "by implication the nuances of thought and feeling, those collateral and emotional references" which form a kind of coded language essential for all creative thinking. The eclectic theory of this study includes the preconscious as part of the total phenomenal self; also included are the conscious and the unconscious betwixt which lies the locus of the preconscious. Little attention is given to the unconscious in the theory, not from a de-emphasis of its power, but because attempts at considering its influence within the experimental procedures were not deemed possible.

Sub-selves slice through a kind of layer cake of the conscious and the preconscious. The analogy is imperfect because the division between layers in a cake is precise and distinct. The division between conscious and preconscious might more aptly be conceptualized as similar to that between colors in a rainbow. Another imperfection of the analogy is the static nature of the concept "slice." What is more probable is that as the phenomenal self palpitates in its uneven way, bumping against the universe, the imprecise dimensions of the sub-self are subject to variance when more than one instant of behavior is considered. This variance includes the relative proportions of the conscious and preconscious as well as the nature of the two levels. Relative to its occupancy of figure, however, the sub-self becomes prominent and dominant in terms of operational aspects of the individual: his perceiving, his differentiating, his behavior. The duration of a sub-self's occupation of figure would be determined by the role, situation, or context perceived and differentiated by the individual.

Just as roles and situations can be determining factors in the bringing of sub-selves into figure, it is theorized that symbols, too, can perform this function. A symbol may be used to trigger a sub-self, to bring it from ground into figure if the sub-self is crystallized around the symbol. The symbol might be a central core of meaning for the individual about which a sub-self has been organized. It should then be possible for the symbol to perform two functions, a kind of skeletal function in which the symbol becomes the bones about which the sub-self is built, and a triggering function so that when the symbol is encountered and differentiated by the individual, the related sub-self, as a consequence, moves into figure and becomes prominent within the total self.

The theory of this study maintains that through deliberate structuring a

symbol for creativity itself can be developed. Along with it, or rather about it, can be constructed a sub-self of perception and consequent behavior, which is characterized by originality, inventiveness, spontaneity, uniqueness, experimentality, etc. Furthermore, the creativity symbol operates at both the pre-conscious and conscious levels, becoming both a symbol for the symbols at the preconscious level and, within the total self including the conscious level, a trigger for a sub-self which is relaxed yet eager for novelty—a creative sub-self. This is a sub-self which feels a minimum of threat and guilt and has available perhaps the widest perceptual field or personal universe that can be experienced by the individual. The creativity symbol also forms a strong tensile link between the preconscious and the conscious, performing what Kubie calls bipolar anchorage of the symbolic process with roots existing simultaneously in the external perceptual experiences of the outer world (conscious) and the internal perceptual experience of the body (preconscious). This is needed if the results of the preconscious symbolic process are to be transmuted into the conscious world.

Even more importantly, perhaps, the creativity symbol acts as a preconscious facilitator or "invitor," allowing the creative sub-self to operate more within the preconscious level. As this sub-self performs more at the preconscious level, it has greater powers for free association—for making analogies or metaphoric connections between the many symbols which exist in the pre-conscious—a form of behavior which may be the root of the creative process.

Thus, in summation, it is theorized that procedures may be followed in which are developed a creativity symbol and a creative sub-self, and a non-creativity symbol and a non-creative sub-self. The creativity symbol can trigger the creative sub-self from ground into figure within the total phenomenal level, while at the same time stimulating creative activity at the preconscious level. The creative sub-self is characterized by much preconscious activity. Further, it allows the fruits of this creative symbolization process to emerge at a hospitable, open-systemed, conscious level. Antithetically, the triggered, non-creative sub-self would be characterized as utilizing little preconscious activity most of which would have been smothered by a closed systemmed, repressive consciousness. The creative or non-creative sub-self, while in figure, controls both the perceptual field and the consequent behavior of the individual.

Subjects

METHOD

The experimental group consisted of 24 females and one male, all junior elementary education majors. The group met from four to six hours per

week as students in a course entitled Elementary School Procedure, which covered the teaching of language arts, social studies, reading, and principles of education. Two control groups of 23 and 15 girls, also junior elementary education majors, were used.

Procedure

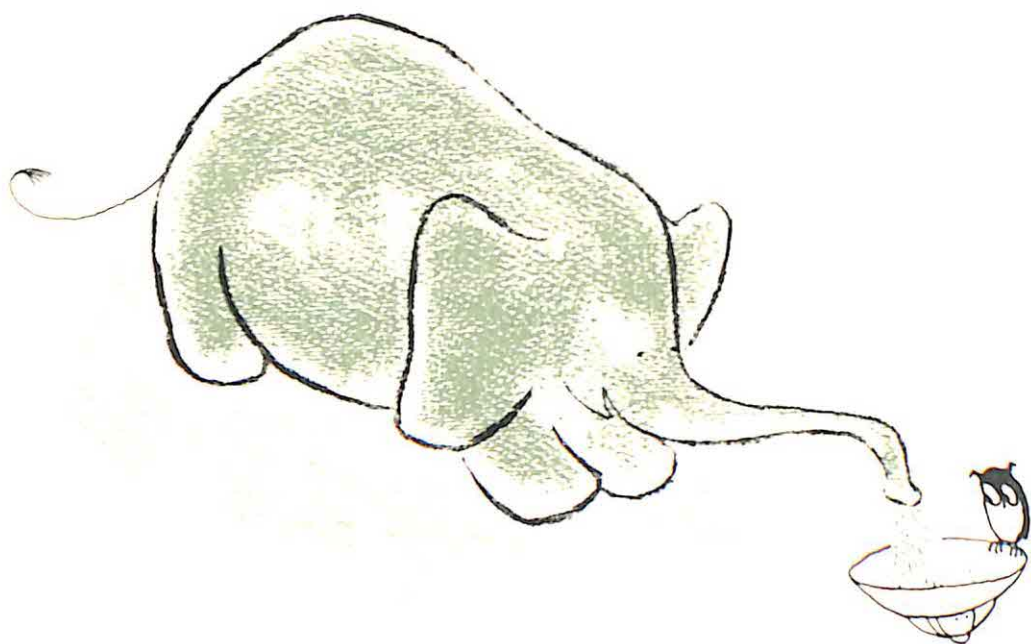
Each student was asked to keep a journal. This was to include a record of what the students felt were significant experiences, insights, values, reactions, questions, etc. occurring in class or outside the class if the student perceived these as being related to the context or the goals of the course. Because these journals are extensive in both range and length, they will be published together elsewhere. However, it is the summation of the student perceptions of "what happened," as expressed in the journals, which probably most accurately describes the experimental procedure. The description which follows is solely that of the instructor and is inadequate to the degree that it is reporting from an external frame of reference what is essentially a number of internal personal processes.

Emphasis in the first stage of the procedure, a period of approximately three weeks, was on the discussion of the following books: *Lord of the Flies*, 1984, and *The Stranger*, in that order. The intent of the discussion was to develop an internalized need for stressing the creative process in both a professional and personal context. Questions discussed included: What is the nature of the world? What are the capabilities and potentialities of humans? How does one feel about and resolve the conflict between status quo and change?

A film, *Visual Perception*, was shown to help in the acceptance of a concept of learning through the making of mistakes and to thus help eradicate the fear of risking mistakes. The film also clarified the perceptual process, especially concerning that which is required to alter perception and consequently change behavior.

During this initial stage the instructor maintained a dominant classroom role, sometimes acting as a devil's advocate, often challenging cliché responses, and frequently providing support and encouragement as a student began to risk new perceptions, ideas, and values. The instructor tried to help the students to become personally involved in and committed to exploring ways they could become more creative in their approaches to teaching, and more effective in developing the creative potential of their future students.

The next step was to introduce the creativity symbol and the non-creativity symbol. This was done in the fourth week by reading to the class a children's book, *The Very Nice Things*. In the story William Elephant and Old Owl find the clothes of a man who apparently has gone swimming. William Elephant finds unique ways to use these very nice things; for example, he makes



William Elephant filled the thing with water.

"See," he said to Old Owl. "It's just the right size. Get in and have a bath."

"I don't think that's what the thing is for," said Old Owl.

The Very Nice Things: (New York: Harper and Brothers, 1959). Text copyright 1959 by Jean Fairbanks Merrill. Pictures copyright 1959 by Romaine Gustava Solbert. Reproduced with permission.

a bird bath for his bird friends with the pith helmet. Old Owl's chronic complaint, even when the man appears and puts the clothes on, is, "I don't think that's what these things are for." The two characters were continually referred to by both instructor and students throughout the remainder of the course. William Elephant became a symbol for willingness to think and act in new, unique, inventive, original ways; while Old Owl represented antithetical behaviors such as conformity, resisting innovation, clinging to the conventional, and fearing to make mistakes. This is not to say that novelty became the sole criterion of student behavior in and out of class. The solutions, ideas, or teaching approaches which emerged during the procedure that followed had to be operational. These had to "work" in real or simulated classroom situations. Thus the instructor held as his responsibility from here on a double function of facilitating the flow of the creative process while also encouraging an accompanying kind of reality testing, which at the same time would not inhibit the creative process.

As in the first study, no special instructions were given as to how these two characters, William Elephant and Old Owl, might perceive. The characters as symbols subsequently came into increasing use, apparently because of their appropriateness, attractiveness, availability, and capability as symbols for integrating the contributions to and refinement of the concept of the evolving creative process.

After the introduction of the creativity and non-creativity symbols, in keeping with some of the conditions hypothesized as facilitating creativity—emotional involvement, an open system, lack of threat, provision for individual daring—the instructor moved from a position of relative dominance toward one of shared authority. The class gradually accepted more responsibility for deciding what was to be covered in future class sessions; when, how much, and how. Committees were set up in each of the curriculum areas to draft these plans. There was also a coordinating committee. All plans were submitted to the class for approval or modification, and were then activated. The instructor made himself available. Sometimes he continued the challenging or supporting role, but generally he tried to act as just a member of the total group. And even when in an infrequent dominant role, rather than take the position of one in authority who was filling a vacuum created by a group's inadequacy, the instructor endeavored to communicate the feeling that his behavior was quite temporary, intended only to help clarify thinking. He attempted to impute his confidence in the ability of the group to quickly reassume responsibility.

The amount of work the class required of itself was more than equal to that conventionally covered in the course. This included lesson plans, teaching units, research papers, etc. in the areas of reading, language arts, and social studies. In addition, the class decided to continue reading and discussing "non-professional" books because of the stimulating effect on their thinking. Selected were *Catcher in the Rye*, *Black Like Me*, *The Genius and the Goddess*, and *Mrs. Bridge*.

There was no emphasis on grades and none were given until the end of the course. This was done in conference with each student. The students had been encouraged to present suggestions for evaluating individual achievement; for the most part, however, students seemed to ignore grades as a problem, apparently wanting instead to get on with what they were planning and doing.

It was decided to substitute for one class session per week a morning in a teacher's aide-student teaching situation. This was to help provide a context of reality for the students' work in educational theory; it would also provide opportunity to try out ideas and lesson plans on how to work with children toward, among other goals, more creative behavior. Ten mornings were given to this activity.

Students conducted many of the university class sessions. This responsibility was distributed among all the students. At the students' initiative, planning and teaching strategy meetings were held with the instructor. The instructor made use of these highly informal sessions to expand concepts of creativity and non-creativity and to reinforce the creativity and non-creativity symbols. This was also done in the many individual conferences requested by students. Although the instructor attempted similar structuring in class sessions, the opportunities for so doing without being obtrusive seemed to decrease as the students took over more and more responsibility for the class operation. This was offset, however, both by increased use by the students of the two symbols in the dialogue of the class sessions and by consistent attention to creativity as a foundation for nearly everything related to the course.

A statement of qualification should be made here lest the reader assume that for any reasonable length of time during the experiment change was constant, even, or linear. In actuality there were uneven leaps, depressions, regressions, and, most important, extreme individual variances. The procedural description above is fundamentally nomothetic. A more valid description will be found in the collection of individual journals kept by the students.

Testing

The experimental group was given the Welsh Figure Preference Test which includes the 62-item Barron-Welsh Art Scale*, a measure of aesthetic sensitivity and preference for complexity. This scale has been used with some success by the Institute for Personality Assessment and Research at Berkeley to differentiate between groups previously categorized as to relative high, average, and low creativity, based on a productivity criterion. The test was administered in February during the first week of the course. The test was given again on Monday of the fifteenth week of class meetings. On Tuesday the experimental group was asked to retake the test and was given the following instructions: "This time I want you to be William Elephant, or let that part of you that is William Elephant take the test and shut the rest of you off." On Wednesday the test and instructions were repeated with "Old Owl" substituted for "William Elephant."

Also used was the Barron Complexity Scale, Barron (1963), a 50-statement true-false instrument based on the work of Paul Heist, Center for the Study of Higher Education, University of California, Berkeley. This is similar to a scale included in the Omnibus Personality Inventory published by that institution. The instrument was encountered by the investigator after the

* A relevant discussion of the scale may be found in *Creativity and Psychological Health* by Frank Barron, Van Nostrand, 1963.

second study was under way, so there was no February testing. The experimental group was given this instrument on Monday of the fifteenth week with no special instructions, and on Tuesday with instructions to take the test as William Elephant, etc. There was no opportunity for the group to take the test again as Old Owl.

One control group was given the Welsh Figure Preference Test. The book, *The Very Nice Things*, was later read to the group. There was opportunity to react to the story and discuss any personal implications the story might have for members of the group. After being given the instructions to take the test as William Elephant, etc. the group was retested. Another control group was administered the Barron Complexity Scale, and the same procedure of reading, discussing, and retesting followed.

TABLE I
*Means and Standard Deviations of the
Barron-Welsh Art Scale and Barron Complexity Scale
Scores in Two Studies*

Group	February	May	May (triggered creativity)	May (triggered non-creativity)
Barron-Welsh Art Scale Scores				
<i>Study # 2</i>				
Experimental (N=25)	M 25.56 SD 12.18	28.12 13.12	44.36 10.76	10.44 8.19
Control (N=23)		M 27.09 SD 13.29	24.70 8.85	
<i>Study # 1</i>				
Experimental (N=18)	M 29.67 SD 10.00	30.94 12.73	38.72 10.54	
Control A (N=24)	M 32.71 SD 10.58	35.04 11.14	30.58 12.61	
Control B (N=22)	M 25.18 SD 11.05	27.41 12.12		
Barron Complexity Scale Scores				
<i>Study # 2</i>				
Experimental (N=25)		M 22.32 SD 4.49	32.16 6.18	
Control (N=15)		M 25.47 SD 7.65	26.00 7.92	

RESULTS

Table 1 shows an increase of over 18 points on the Barron-Welsh Art Scale for the experimental group from the mean in February to the mean in the Tuesday (May) retesting when the group was asked to take the test as William Elephant (triggered creativity). The increase is over twice that of the first study. There is a decrease of over 15 points when comparing the February mean with that of the retest (triggered non-creativity) when the group was asked to take the test as Old Owl. When the mean of the May (triggered creativity) retest scores is compared with the mean of the test taken Monday, the day before, when no special instructions were given, the increase is over 16 points, which is also more than twice that of the first study. For a control group there is a slight decrease in comparable means. When the Wednesday retest (May, triggered non-creativity) scores of the experimental group are compared with those of Monday, the decrease between means is almost 18 points.

There is an increase of about 10 points on the Barron Complexity Scale mean score from Monday's testing to Tuesday's retesting (triggered creativity) when the experimental group was asked to take the instrument as William Elephant. This contrasts with almost no gain after following similar testing procedures with a control group.

In the first study covariance analyses of the gains comparing experimental and control groups (including a group used to control for influence of the instructor variable) and test-retest results were significant beyond the .05 level.

Inasmuch as the hypothesized increases and decreases of the second study are two-fold those of the first study, one might well expect to find a significant difference between the means of the experimental group under conventional testing situations and the means of the same group under a triggered testing situation, especially when the creativity symbol is used for triggering. (There was no development or use of the non-creativity symbol in the first study.) Table 2 shows analyses of variance and test results when the May means are compared with the May (triggered) means. The differences between means of the experimental group are significant at the .001 level. Because the increases between the means of the February scores and the means of the triggered creativity scores are even greater, there is no need to test the significance of these differences. The comparison involving triggered non-creativity means and February means is also significant at the .001 level.

DISCUSSION

The questions basic to the meaning of the findings of both studies are: How good are the tests as instruments? What do these tests purport to measure?

TABLE 2
*Analyses of Variance and t Tests of Differences in
Test and Retest Scores on the
Barron-Welsh Art Scale and the Barron Complexity Scale
For Experimental and Control Groups in Study #2*

<i>Comparisons</i>					
<i>Group and Tests</i>	<i>Source</i>	<i>df</i>	<i>Variance Estimate</i>	<i>F</i>	<i>t</i>
Experimental, Barron-Welsh May and May (triggered creativity)	Between	1	3296.7	22.0*	4.7*
	Within	48	149.9		
Experimental, Barron-Welsh May and May (triggered non-creativity)	Between	1	3907.3	31.4*	5.6*
	Within	48	124.6		
Experimental, Barron-Welsh February and May (triggered non-creativity)	Between	1	2858.0	25.4*	5.1*
	Within	48	112.3		
Experimental, Barron Complexity May and May (triggered creativity)	Between	1	1210.3	39.7*	6.3*
	Within	48	30.5		
Control, Barron Complexity May and May (triggered creativity)	Between	1	2.0	—	—
	Within	28	65.1		

* significant at .001 level

The Barron-Welsh Art Scale can be accepted with some confidence as a measure of aesthetic sensitivity. It discriminates between groups of artists, a standardization group (M, 40.3) and a first cross-validation group (M, 39.1), compared with an unselected adult population (M, 13.9). Furthermore, the nature of the items on the scale is evidence that a high score indicates preference for asymmetry and complexity, while a low score suggests preference for symmetry and simplicity. This simplicity dimension is not to be confused with the possible simplicity in the elegance of a creative solution. Preference for simplicity in this dimension is rather a reflection of an intolerance for conditions of complexity prevailing during the problem-solving process. The Barron Complexity Scale is also, as the title suggests, a measure of complexity. Heist reports statistically significant differences between interviewer adjective descriptions of high and low scorers on this scale when interviewers, not

knowing complexity scale scores, rate complexity. These and other data are reported by Barron (1963). In view of these data it may be concluded that in both studies experimental procedures developed high preference for complexity by the subjects, in contrast with those in the control groups, when tested as triggered creative sub-selves (William Elephants). Use of the Barron-Welsh Art Scale indicates that low preference for complexity, when the subjects were tested as triggered non-creative sub-selves (Old Owls), is also a consequence of the experimental procedure.

The possibility that a creative mental set, provided just by an introduction to the creativity and non-creativity symbols through familiarity with *The Very Nice Things*, might be responsible for the results may be discounted because of the analysis of the data for the control groups. The story simply and clearly tells of an encounter between a creativity-oriented character and a conformity-oriented character, with the former cast in a highly positive light. Yet when asked to take the tests as William Elephant, that is, to think as the creativity symbol, the results for these groups reveal no "creative" perceptual frame of reference under triggered conditions. No significant gain is reported. In fact, in the case of the Barron-Welsh Art Scale scores, the mean decreases and the standard deviation also becomes considerably smaller. These results would indicate that just knowing how William Elephant and Old Owl viewed things is not enough to alter perception. Apparently there must be a critical change within the subject, here postulated as the development of a sub-self, for a perceptual dimension such as preference for complexity to be significantly modified.

The findings for the experimental group are of interest when one considers that there was no direct teaching of aesthetic sensitivity or preference for complexity, the consideration or even mention of complexity or aesthetic sensitivity being carefully avoided in the experimental procedure.

The question remains: How good are these instruments as measures of creativity? Barron (1963) reports that the Barron-Welsh Art Scale has been found to have significant validities against criteria of originality and creativity. Examples of the range of samplings are as follows: Groups of architects, "creative," "control sample," and "representative," have means of 37.1, 29.5, and 26.1 respectively. Groups of research scientists, "creative," "less creative," and "least creative," have means of 30.7, 22.1, and 19.2 respectively. Similar comparisons are made with groups of writers, mathematicians, and others. Barron also reports that the Barron Complexity Scale apparently discriminates between creative and less creative groups. A sample of 22 female college students nominated by the faculty for outstanding creative potential have a mean of 27.14 as compared with a mean of 23.9 for a sample of 113 classmates, a mean difference significant at the .01 level of confidence. Commercial

writers who successfully write to sell have a mean of 23.9 as compared with a mean of 31.3 for creative writers whose major concern is "to create a work of art," again reported by Barron as a highly significant difference. Barron does report, however, a comparison of female mathematicians on the scale as not resulting in similar findings.

Inasmuch as the statistical concern of the studies is with a hypothesized increase or hypothesized decrease in experimental group means when tests are taken as the triggered creative or non-creative sub-selves, the significant difference between groups described by Barron in terms of degree of creativity, and the significant differences found between means in the two studies, suggest the possibility that creativity and non-creativity, as evidenced by preference for complexity and simplicity within perceptual frames of reference, may have been taught. More precisely, creative sub-selves may have been developed which, when triggered, have characteristics of perception similar to those of groups defined as comparatively creative; and in the case of the second study, non-creative sub-selves, which have characteristics interpolated as being expected of groups with creativity at a level below that of an unselected population, may have been developed and triggered. And both sub-selves, creative and non-creative, reside within the same total self.

One might assume that preference for complexity and asymmetry would reflect conditions characteristic of preconscious activity, where analogical, allegorical, and metaphorical symbolic processes would more likely occur than where there existed a preference for symmetry and simplicity. Such can only be inferred from evidence that creative people seem to prefer complexity and asymmetry. There may be, however, a circularity in this argument. Perhaps a more comfortable assumption is that complexity and asymmetry are related to open systems while simplicity and symmetry more likely fit into closed systems. Furthermore, open systems will tolerate preconscious activity; closed systems will not. This is supported by Kubie's description of the repressive effect on preconscious activity of the kind of consciousness which has characteristics of closed systems. That there is more preconscious activity in the creative sub-self or less in the non-creative sub-self, however, cannot be directly demonstrated in this study. Yet a need remains for the "preconscious" construct in the conceptualization of the creative sub-self in order to distinguish between the non-threatened conscious functioning characterized by lassitude and laissez-faire and the open-systemmed, also non-threatened, creative conscious functioning which delights in new experience, new perception, and new relationships between symbols. Although the existence of the preconscious or its degree of activity in a sub-self defies precise validation, as a theoretical construct it helps explain properties of the creative sub-self and provides a locus for the sub-self's process sources.

If members of the experimental group do, in a triggered condition, perceive "in a creative way" it should follow that consequent behavior would also be creative. Taking a test is, of course, only limited evidence of such behavior, especially when the test only measures certain dimensions ascribed to creativity. It would be of great interest to structure situations which would test the triggered creative sub-self in problem-solving or productivity circumstances. It would also be of interest to examine the effect of other variables such as time, and/or various types of reinforcement, such as nurturance, on the strength of the sub-self. Also of general interest is the question of influence of the sub-self in the process of transfer to other sub-selves and thus on the overall personality.

Comparing the results of the two studies raises the question of why gains in the second study increased so dramatically. A partial explanation may be that only one creativity symbol was used here in contrast with at least two in the first study. There was, therefore, much more emphasis on the development and use of the one symbol in the second study. Moreover, the instructor felt more secure in the use of the William Elephant symbol—perhaps it now had more meaning for him—and more confident in the experimental approach to teaching the course. He had "come this way before." This probably led to an even more non-threatening, open system in the second experimental situation. It is also possible that the introduction, development, and use of a non-creativity symbol in the second study enriched the utility and meaning of the creativity symbol.

The choice of William Elephant and Old Owl as creativity and non-creativity symbols was intentional. Because the two are characters in a book for children, they present a minimum of striction for a reorientation from a wholly rational "adult" context to the sometimes playful, childlike, or innovative context which may be a condition of creativity. They also function as an integral part of the developing sub-selves, their behavior in the story launching skeletons, essential parts about which the sub-selves may be crystallized. This combination of childlike quality and an operational framework for a new sub-self further contributes a bridge in the experimental procedure for moving from the context of "university student, under guidance of an instructor, seeking personal meaning for a concept of creativity," to "human being and new teacher in process of becoming more open and innovative in perception and action, and more personally responsible for this process." Consequently, since William Elephant and Old Owl are at the core of the experimentally developed sub-selves, they become the appropriate symbols to be used to trigger the sub-selves under testing conditions.

In his chapter, "Play and Irrelevance," Gordon (1961) states, "the childlike and intuitive 'plasticity of vision' necessary to creativity on an adult level in-

volves a paradox; it is childlike, but it is also childlike transposed, informed by an adult sense of responsibility and purposiveness." (p. 131) Although Gordon's work was encountered by the investigator after the completion of the second study, this statement buttresses the rationale for the initial stage of the experimental procedure. The development of "purposiveness" through discussion of the novels was intended at the initial stage. A goal was the establishment, personally and professionally, of an intrinsic need for and commitment to creativity. The "sense of responsibility" mentioned by Gordon may have been somewhat accomplished by the emphasis in the procedure on continual reality-testing of the ideas, teaching approaches, etc. which emerged from the experimental context of emphasis on creativity.

In discussing part of the Synectic technique of developing creative capacity, Gordon describes some individuals as "so wed to rigid inner control and rational behavior that any alternative behavior is anxiety-producing." (p. 46) He says that this kind of person needs to see someone else let go first and then he will "hesitatingly and finally with relaxed confidence" begin. This, too, might be a partial explanation for "what happened" in the two studies. If the students perceived the instructor as a model worthy of identification or imitation, a super-ordinated person (Miller and Dollard, 1941) who held creative behavior as an important value—it could be learned, to be creative was good—then they, too, could relax and become confident participants in the creative process during this experimental procedure.

The psychological and educational implications of this and the original study are many. The concept of sub-selves has utility for a number of areas of investigation and practice. It is an encouraging concept because it holds promise of significant behavioral change without the necessity for emphasis on total personality or overall behavior. The use of symbols to trigger the sub-selves has pedagogical import in many areas of the curriculum and in methodology. And the findings do suggest that something more can be done about creativity than just to have, like motherhood, everyone in favor of it.

SUMMARY

Through procedures in a semester university education course, attempts were made to develop creative sub-selves and antithetical non-creative sub-selves crystallized respectively around a creativity symbol and a non-creativity symbol, which could be used to trigger the corresponding sub-self, i.e., bring it from ground to figure. A comparison of means between tests given under conventional and triggered conditions reveals differences significant at the .001 level. The creative sub-self scores indicate a high preference for complexity, and the non-creative sub-self scores show a preference for simplicity.

It is also possible to assume that the testing instruments are capable of discriminating between groups of varying levels of creativity. If the assumption is correct, the experimental procedure may have developed perceptual frames of reference which could be interpreted as creative and non-creative. Mean gains in this second study were twice the comparable mean gains in a first study.

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Using the "examined life" as the goal, Dr. Samler examines the possibility of mental health programs in our schools and various ways of attaining self-understanding—especially through cognition.

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The School and Self-Understanding*

The guidance process inevitably aims at self-understanding by the client, by definition a key aspect of mental health. This is a precondition for making mature choices; for the assumption of responsibility for self. This kind of learning, perhaps the most important in the world, must start before the individual attempts to relate himself to the working world. Its logical place is in the elementary school. This paper addresses itself to the problem, but does so pleading a special case: the greater use of cognitive techniques.

What is the school's situation in fostering this self understanding? It is confronted with a most difficult job. On the one hand, the school is expected to prepare its inhabitants for the good life. Youth must become competent of course, in the ordinary sense of the term, but also should achieve a level of self-understanding, accept self and others, live with others in cooperation and trust rather than in suspicion, be concerned and helpful rather than competitive and cynical. On the other hand, there is the way to make a quick dollar. In this context Hutson (12) notes that the educative principle and the competitive principle so characteristic of our culture and economy cannot be reconciled.

It is wonderful to have the world's goods in the supermarket, but there is a price to be paid for it and we are paying it, quite handsomely. There is no

* I am indebted to Eli M. Bower of the National Institute of Mental Health and John R. Lawson of the University of Maryland for the opportunity to discuss the ideas in this paper with them. This does not mean that Drs. Bower or Lawson necessarily endorse these ideas.

surcease offered here. The point is that in the schools alone we are not going to remake our culture.

Not that we have not tried, but the number of such attempts is dishearteningly limited. A few years ago the *Personnel and Guidance Journal* sought to pull together noteworthy programs in mental health in the schools (2). Out of this reasonably thorough search it was possible to present only six reports: the programs at the Institute for Child Study at the University of Maryland, Ojemann's work at the State University of Iowa, Hall's description of his efforts at the Nebraska Human Resources Research Foundation, Moustakas' human relations seminar at the Merrill-Palmer School, John R. Seeley's "human relations classes" at Forest Hill Village, and the ambitious program of teacher education at the Bank Street College of Education.

These and similar programs referred to, by Withall (35), for instance, are nearly all moving and even exciting programs. Yet the reason for what seems to be limited progress must reside in factors beyond budget. Of course there must be a phenomenal difference between teacher attention to the individuals in a class of thirty-two and, as has been found necessary in special education, in a class of ten or twelve. However, the idea of doubling or tripling the educational budget seems quite unrealistic. More important, there can be no assurance that teachers with such small classes automatically become desirable models. It may well be that money will buy more than the skeptic will allow, but even so, there are the limiting factors of the humanity with which teachers are endowed, their personal security, tolerance of differences among others, and their ability to inspire trust in others. Nor will a fancy establishment or a democratically run school counter the many hostile facets of our culture. Even a partial list of what goes on all around us is unnerving: cut-throat competition; not only absence of ethical behavior but absence also of indignation at the *lack* of ethical behavior; cynical disregard of the rights of others; gerrymandering; bribery and blackmail of public officials; separation of men and women from society under barbarous conditions when crimes are committed; a death and accident toll on the highways, largely preventable, that is unbelievable. In 1961, in the Fourth John Dewey address, Gardner Murphy (19) properly asked whether a teacher can teach rationality in such massive unreason as flourishes in our time.

This is proper ground for despair and a possible proposal that the Lord start over again. However, there are some opposite signs. There is the response to the Peace Corps, for instance; the insistent civil rights program; and the constant, if painful, democratic process of correcting our own inequities. It is possible to take heart from these and to work in productive directions in the hope that to an extent we can redress the balance.

One emphasis in some school mental health programs is on broadening the

teacher's understanding and increasing her personal security. Following another, children are taught to consider multiple motivation and behavior dynamics. In the process, there is a certain amount of practice in self-search. These are the goals also of those school counselors who tend to identify with the major movements in mental health. This is desirable and necessary and should be continued and expanded. However such programs are not widespread, nor is their number growing at a great rate.

In this circumstance the imagination turns to additional possibilities. This is the burden of this paper. In a number of ways the school mental health program mirrors the formal therapeutic situation. In such a program, the relationship between student and teacher is characterized by trust. There is understanding and acceptance of the student by the teacher. It does not seem too much to say that transference is manifested, and, perhaps less obviously, also counter-transference. The major concern of the mental health worker in the schools is with the feeling life; and as self-understanding is fostered, the great discoveries and inventions of classical psychoanalysis come into play.

In following the therapeutic model, in focusing on the feeling life, in seeking really to restructure personality, the program follows the classic psychoanalytic formulation of basic motivation. This is a view which amply supports the existence of profound unconscious elements in personality and the pre-eminence of drive, need, personality defense, and sublimation in the organization and maintenance of behavior. The minimal influence of cognition, if indeed it is influence at all, is clear in Freud's teaching. In his view, the ego is the agent of the id, the blind and primitive pleasure-seeking drive, and is designed to further the aims of the id. The ego's energy and power are derived from the id's great demanding impulses and has no viability of its own.

This is the classic view, and it prevails in many settings. For instance, even the Neo-Freudians subordinate cognitive ego functions to the need for the emotional experience. Fromm-Reichmann's statement (6) is characteristic:

Working through should be continued until the time is reached when the intellectual understanding of the problem, of its previously dissociated causes, and of its various interlocking mental and emotional ramifications is gradually transformed into real creative emotional insights.

Granting what theory and experience indicate, and taking into account that this may be only a cry of pain, a defense against the more arduous enterprise, something else may be possible. A new line of thinking has emerged in the analytic field and in more orthodox psychology. It is doubtful that these developments are taken into account sufficiently in mental health work in the schools.

A NEW EMPHASIS: COGNITION

It is now almost two decades since Hartmann, Kris, and Lowenstein (9) offered a revolutionary reappraisal of Freudian personality typology. The idea that the ego is not an agent of primitive pleasure-seeking drives, but has energy and vitality of its own made it possible to emerge with new conceptions, led to change in emphasis and technique in the therapeutic relationship, and, initiated the alert and self-conscious movement in ego psychology.

The theorists who have emphasized cognition include Schachtel (30) who urges the influence of man's search for meaning in life, Heider (10) and Hartmann (8) who call attention to the influence of intention, as does Allport (1). Also cited by Allport are Wallas, who includes an "instinct of thought" in man's motives, and Bartlett and Cantrill as regarding man's search for meaning as perhaps the ultimate motive in life.

Starting with Schachtel's ideas, Neisser's (22) examination of childhood amnesia led him to question the concept of repression and to look for an answer in the discontinuities in cognitive functioning which accompany growth into adulthood. Thus conceived, childhood amnesia is amenable to quite a different kind of treatment than is now available.

McGuire (18) starts his syllogistic analysis of cognitive relationships by pointing out that the idea of the "rational man, long out of style, is now undergoing a remarkable revival." He refers to an impressive list of theoretical and experimental approaches referring variously to "tendency toward balance," (Heider), "balanced structure," (Cartwright and Harary) "balanced matrices," (Abelson and Rosenberg) "stress toward symmetry," (Newcomb), and most recently, "cognitive dissonance." (Festinger)

Although it must be searched for, there is clinical literature which illustrates a therapeutic approach utilizing strong cognitive elements. This is the technique that Dollard and Miller (3) follow in their discussion of "discrimination." Similarly Monroe (17) presents the case of Mrs. S., who for example, is asked productively by the therapist whether she had heard of a particular psychological theory. In Thorne's (34) eclectic volume, the last 124 pages are devoted to the problem of maximizing intellectual orientation.

Lakin Phillips (27) denies the need for a concept of unconscious motivation and works with his clients in terms of their conscious awareness and understanding. On the face of it, his method is therapy using cognition as the major vehicle. The reiterated work of Albert Ellis (4) probably is well known. Less well known is a paper by Betty Ganzhorn (7) and one by the present writer (28) on using the client's available resources, including cognition, much more than we now do. As can be seen there is no tidal wave of cognitive approaches. Nevertheless there is a clear direction, reiter-

ated by observers, researchers and clinicians, toward the use of intellectual understanding.

The theoretical proposals and the clinical instances are intended to buttress the point that increasing attention is being paid to cognitive approaches and techniques in fostering personality growth. Can the schools travel this road? What can the schools do?

THE SCHOOL, COGNITION, AND SELF-UNDERSTANDING

It seems strange to say that the school should look to rationality and cognition in fulfilling its purposes. This is, almost by definition, the school's stock in trade. However, our prevalent counseling philosophies, i.e., Rogerian and the watered down elements of psychoanalysis, run counter to use of rationality and cognition.

What can the schools do? They can continue and extend present forward-looking practices. As teachers learn to use the six-area framework of the University of Maryland Institute for Child Study, their view of children will become more objective and understanding. The teacher-in-training exposed to Moustakas' seminars stands a very good chance of coming out a more secure person with greater maturity than before, and, therefore, should be a better teacher. The twelve-year-old in Ojemann's University School should come out of his exposures inoculated against black and white judgments and aware of some of the underlying motives for behavior.

The goal of these and similar programs is "the examined life," a phrase that Socrates 2500 years ago fortunately did not copyright. The examination of one's own motives or the motives of others in the mental health programs and texts is one aspect of Socrates' great teaching. There are ways in which this can become a most important enterprise—what, in man's condition, is more important?—but not before the school becomes committed to such examination as in itself desirable and necessary. It is pointless to take the schools to task; it is too easy and popular an exercise anyway. Yet with respect to guidance people, it is to be noted that Shoben (31) felt that the nonfacilitation of an active search for values among students, an aspect of his view of the examined life, constitutes a failure of guidance and the school.

So many have written so movingly about the experience of coming out of the dark that it seems pointless to repeat what by now is in modern folklore. Although the climb is endless, the view is increasingly breathtaking. In more mundane fashion, therapists say that there are deeper and deeper levels of understanding. This climb is the goal. Its end is always beyond our reach. What are some of the techniques possible within the school which would enable the student to see this goal in a cognitive framework?

Teaching the Dynamics of Behavior

There is nothing at all new in such an idea. Ojemann (23) has done it handsomely for a decade and a half and bolstered it with the backbreaking task of rewriting the texts used in the Iowa University School so that they mirror, for instance, multi-values and many faceted motivations. Increasingly, first-year college courses in psychology are seeping into the high schools. The stream should become wider, deeper, and more powerful. If two conditions are met, it does not really matter what philosophy is advocated by teacher or discussion leader. The chief consideration is whether the rationale provided (e.g., learning theory of one or another persuasion, ego psychology, neo-behaviorism, analytic psychology of the Freudian or Adlerian variety, or any other) offers clarifying concepts. The point is that whatever the rationale, it should help the student to observe and follow his own behavior and as he feels it necessary and possible, attempt to intercept and change it.

The conditions to be met are: first, that this kind of investigation by teacher and students be moved out of the 32 pupil class into the 10 to 12 member discussion group. The reason is no doubt too obvious to belabor, but basically flows out of the second condition: that development of these ideas start with, or are, as quickly as possible, made pertinent to the individual in the group. This is essential here since what is to be learned must arise from and be integrated in one's own living. The term "cognitive" is capable of carrying such sterile connotations as to negate what is here intended. While this is not group therapy, it is not barren intellectualizing either. Just as the central nervous system cannot operate independently of the autonomic nervous system, so intelligence and cognition, to have validity, must take into account the rich life of feeling.

However, if pupils' private feelings are to be discussed, there will be charges of intrusion of privacy. The school will be charged with meddling in the family and all the old sanctities will be raised. This will receive attention at a further point.

Of course, such a program is easier to talk about than to carry out, but the saying does provide a map. At least the direction is clear if one wants to go that way. Even so, the proposal to teach behavior dynamics is so general that a specific example will be useful.

If I were to lead such a group, I would use Sullivanian concepts as a framework for the reason that they have been clarifying and exceedingly useful in my need to understand my own sometimes unhappy behavior, and to make progress in intercepting it. Also, in my own teaching which is at the University level, these ideas have been exciting to communicate and also quite clearly useful to students. I refer specifically to the central concept of anxiety

and the self-system which as it happens comes complete with directions for recognition of clues.

The Control of Behavior

The Freudian revolution presented us with the containment of impulse, id-based, as a central and necessary direction for behavior of man in society. Perhaps as part of the foundation for the emergence of ego psychology, perhaps in reaction to the extreme view of man as moved by blind and primitive libidinal needs and wishes, a number of observers, among them Maslow (16), make a case for impulse gratification as against control. The very strong probability is that the two are synergetic. Gardner Murphy (20) says it movingly and beautifully.

... the nurture of rationality may perhaps lie in other efforts than the sheer encouragement of rational thought; indeed, that the rational may best continue to grow in the instinctive soil in which it was engendered, and that too clear and sterile a surgical separation of thought from its ancestral and parental roots in love and impulse may threaten its viability. And if this should by any chance be true, it would mean that the learner must not be deprived of the riches of his impulse-life, and that the teacher must be a quickener of that impulse-life through which thought can grow, indeed a shaper and molder of the impulse into the rationality which comes from a healthy craving for contact with reality.

Perhaps we can abandon both extremes, the control of impulse and, so-to-speak, its gratification, in a mode of living that utilizes various degrees of control, depending upon the situation and its meaning. However, in evaluating when feelings are to be subordinated, there is a need for some reference point. While I can provide no ready and precise arithmetic and while I know that what is offered is capable of distortion, I suggest simply, that feelings are to be *controlled* when, if expressed, others would suffer undeservedly.

An example out of our current difficulties in living with each other may make the intention clear. A man says that no matter how much he is urged in church and elsewhere, he cannot bring himself to like Negroes, much less love them. This is not the issue at the moment, which is that he *behave* decently. The issue is as simple as that. The example is intended to highlight a class of instances in which native feelings are to be subordinated, suppressed, held in check. They are *not* to be an excuse for inability to behave decently to others. Proper behavior should become a set of expectations and part of the role of being human. These expectations should be as taken for granted and in a way beyond question as are the ordinary roles of being male or female. The difficulty, of course, is determining what *is* desirable and under

what conditions. In the example given, the matter is clear-cut, but ordinarily there will be many problems.

This approach in no way supplants the more basic responsibility of looking into ourselves and coming to terms in positive ways with the disaster and hate in us that results in inimical behavior to others. What is urged perhaps is second best, but if so, it is second best to a wonderful ideal. In its own terms, it is important to note that as behavior is adopted and practiced, its associations and rewards should reinforce it and in time affect feelings.

THE EXPLICIT SUPPORT OF VALUES

Subordination of feelings and control of behavior can be seen as a value. If, as I hope, this is not immediately abhorrent, the idea can be carried further to the point of identifying a number of values which guidance personnel in the schools should support in working with their school clients.

The issue of support of given values by the school is not really for discussion. It is clear that as a social institution, the school's values are not only implicit in the function it performs, but explicit in the communications made to students, parents, and the general public. By virtue of its being, the school says education is important; one should be educated. One should be responsible, studious, clean, neat, courteous, outgoing, cooperative. Present rewards should be foregone for future goals. Counselors in the schools may be ready to grant this since it is well nigh indisputable, but may point out that in their professional role they cannot and may not deliberately or subtly push the particulars of any values.

There is no space to develop this great problem. From prior consideration of at least some of its facets, a number of statements can be made. Three of these are safe and can be documented but the fourth is arguable.

(1) There is no task, including research in the hard sciences, that is not value inflected.

(2) Values are communicated in ways other than in formal language. Very specifically and despite professions to the contrary, counseling has a value system built into it.

(3) Since values, with or without counselor awareness, will be communicated to the counseling client, the counselor should become aware of them.

(4) Since by virtue of the counseling task, the particular relationship, and the presumable goals to be achieved, there will be stress on some values and at least implicit derogation of others, agreement might be reached on at least specified values to be supported.

The problem may seem less sacrilegious if it is stipulated at the outset that no large charter will be drawn. No attempt will be made to rewrite the ten

commandments. Instead, perhaps agreement can be reached on a minimum number of values to be supported and we can agree also about such values that they will be regarded as capable of having exceptions to their general applicability.

What can be accepted? Surely we can agree that there is virtue to the examined life. To an extent this is capable of influencing thought and action. Since the organism is unitary, it seems not unlikely that one accepted value will lead to another. The need for thoughtful self examination, not self review, seems to lead to a need to review what has become a fetish with us, the jealousy of privacy. It seems hazardous to argue against privacy. However, the point is that we have too much rather than too little privacy. This does not mean that the bathroom door should not be locked but rather that we must construct in Schachtel's and Dorothy Lee's terms *the open self* as against *the closed self*. The cult of privatism has need for the fences to be up and in good repair, for the self to be well guarded. The opposite is urged. What are all the dreadful secrets anyway except evidence of our humanity? Openness can be hewed to as a value to work toward, to say how one feels, to be spontaneous, and to identify what one is uneasy about. Of course, there are limits that ordinary sensitivity will supply.

This beginning list is not intended to start an inventory of values. Probably I am sufficiently foolish to offer such a list, but the emphasis here is on values that can be taught in reasonably cognitive ways. It is readily possible to list the presumably desirable values, for instance, those that Jahoda (14) reports as meeting substantial agreement in the form of attributes of positive mental health. It is difficult to see, however, how maturity, self-acceptance, cooperativeness, responsibility, and others can in effect be taught. Rather they seem subject to learning from models, from proper experiences with others, from experiencing physical and psychological safety rather than from expectations set before one. It may be, of course, that ingenious teachers, perhaps building on a psychology of implicit expectations can devise means of fostering agreed-upon values in these areas. For the present, it is proposed that specified values be supported affirmatively and without apology. These are the examined life, openness, and the control of feelings when their expression leads to inimical behavior. That it may make very good sense to hew to absolutes is indicated by Farnsworth (5) in discussing the problem of premarital sexual intercourse among college students.

A short time ago a president of a women's college asked me, just for the purpose of focussing over our ideas, "Is premarital sexual intercourse always wrong?" and I said "Yes." This surprised her somewhat, because psychiatrists are not supposed to employ terms that carry value judgments. We argued it back and forth a good deal, and she

backed me into a corner several times, but my final defense was, "If you exhibit uncertainty or ambivalence on this question, then you are faced with the task of making decisions as to when it is right and when it is wrong." I said I prefer to take the viewpoint that if college students are found to be having intercourse, that's understandable. It's been going on for as long as there have been colleges. We do not condemn them, but we do not confuse them by saying that what they did was right. Rather, the college maintains the ideal standard of society in general, even though it is not adhered to by large segments of society. The idea exists, and it is the job of those of us who work with students not to pass judgment, not to moralize, but to help them live up to the idea.

If this can be done, values, as John E. Smith (32) indicates, can be made to stand as the referent points for decisions and action. This should be quite clear from the example given concerning feelings and behavior with respect to Negroes. It is not impossible that a whole set of unhappy and inimical behaviors can be intercepted and changed through reference to given guidelines.

In the loosening of religious precepts and in the inevitable changes in the times we have lost a set of guidelines for behavior and living. This is as it should be. But, in fact, in these complex times, a vacuum has been created—probably just when we could least afford it. Something must take its place and no doubt something will. Hopefully, whatever it is, it will move us away rather than toward Walden II. The cry for guiding principles, evolved by ourselves, although by no means popular, is yet not a cry in the wilderness.

Although the setting is in higher education, it is not inappropriate to hear George Stern, whose work on differential college cultures is well known, on the problem of student needs (33).

The excitement of ideas and discussion which I once found at Chicago as an undergraduate, I have re-discovered in some of my own classes today. But the challenge of abstractions, principles, and values in these current instances has been aroused not by intellectualism but by inter-personalism. Students today seem interested in inter-personal behavior, the analysis of motivation, and the problems of dealing effectively and with decency in human relations. Any material placed in this context arouses a depth and intensity of response which belies the apathy and privation encountered elsewhere.

But there is another aspect to this problem. For many of the students in today's college classrooms, the ability to participate even under the circumstances just described seems severely limited by a deeply ingrained fear of introspection, self-expression, and departure from stereotyped views. Above all, they fear the consequences of personal freedom and seek security in dependence and conformity.

ON THE EXAMINED LIFE*

The examined life has been cited as a value but requires more detailed attention. As a goal, as a commitment, its hold on man is ages old and has been attested to by great souls in all times. In countless generations past, this task had to be done intuitively, or only in the autumn of life; in our time there is a methodology for progress toward it.

How can the school reinforce or help to bring it about?

In addition to specific procedures, and in the same way that it emphasizes good citizenship in many school settings, it can maintain search and awareness of self as a general education goal. Since available subject-matter texts do not generally have this type of orientation, teachers will provide their own adaptations if only they are convinced of the validity of the problem and its potential contribution. Of course, to do this they must know what they are about.

This should be one of the school's leitmotifs. In this area there are quite specific teachings that the school can provide and learnings that it can foster.

MAINTAINING SELF-RECORDS

The initial work in the maintenance of behavior logs, of others, but not self, is reported by Prescott (26) and by Peck and Prescott (25). This is part of an ambitious program in teacher-training at the University of Maryland Institute for Child Study which, however, is addressed to adults. Data on the usefulness and contribution of the program is presented in reference 13. Briefly, the observer learns to view and record behavior objectively and in specific detail. As nearly as it is possible to do so, he becomes a camera eye and recording ear. He becomes aware of the distorting effect of interjecting his own values and predispositions in noting behavior. This is the critically important first stage. After a sufficient number of such samples of behavior are gathered, characteristic behavior is identified and interpreted.**

Two departures are proposed for consideration in adapting this type of

* It is taken for granted that by definition counselors are in the business of helping students in examination of their motives, assessing the energy and weight behind each, and seeing them as a pattern. The counselor's job is to assist the student, i.e., to use the phrase, to achieve degrees of self-understanding. This is the purpose of psychological testing, and the way in which occupational information should be utilized. Counseling interviews should serve precisely the same purpose. It is on the basis of self-understanding that choices should be made, as a result of weighing of alternatives. For each available choice, information is considered in terms of probable outcome and importance to the individual according to his own needs and his own development.

** No doubt there are related approaches elsewhere. For instance, Richard Jones' (15) report of his own work but on a preparatory school level is for attention. The Institute for Child Study program should stand as an example only of what is possible.

methodology for the schools. First, the records to be maintained are self records, not observation records of others. In some respects, this makes the task easier; in others difficulties arise. It is less threatening to observe others since the self is not immediately involved. The walls do not go up automatically, the fences are not immediately charged with electricity. Corrections in method by the observer are capable of being accepted without considerable ego involvement. This is even more pertinent when data are to be pulled together for interpretation. On the other hand, the individual, as his own subject, is always available. This is a greater advantage than might be granted at first thought. Although they may be hidden and distorted, the all-important areas of feelings, fears, embarrassments, guilts, gratifications, unhappinesses, satisfactions, at best inferred from observation of others, are here at hand.

Little work has been done in the maintenance of self-records, although in a way all self-study proposals require keeping notes of some kind. Horney's system (11) requires keeping track of free associations, and involves developing a shorthand system for quick notations. In the context of the need for training in self-study, Dollard and Miller (3) note that this may seem a laborious amount of training to inflict upon a child and go on to make a useful point:

We think, however, that this kind of training would not have to be invoked very long before the child would begin to get the hang of it. For all we know, it might be as easy to learn as the multiplication table. We have no doubt that however strange such training may seem at the present time it will sometime be part of the repertory of human culture.

The mind of the child could be trained to deal with such problems if the home and the school were able to train it. Much that has later to be done by exhausting treatment of adults might be taught mass-wise at elementary levels. Both parent and elementary-school teacher must eventually learn to train children to use their minds in solving emotional problems. As adults, such children would then naturally have recourse to self-study when they were faced with bothersome problems.

Elsewhere, the present writer (29) has called attention to other literature in this area including Peck's study which showed that with minimum help, the untrained individual can make notable progress toward greater insight into his own behavior. In a six-month self-record aimed at identifying anxiety and the related security operations, his subjects, under Peck's guidance, presented courageous personal material. They began to see their characteristic patterns of behavior and made appropriate inferences concerning their living. To a limited extent, the present writer has used Peck's method with occasional

students in mental hygiene classes. A brief excerpt from Peck's research (24) may illustrate the self-observation record:

There are one or two people in my section who previously annoyed me because of overbearing attitudes which resulted in any number of people being embarrassed by these two individuals at different times (this annoyed me even when it was not directed at me, because in my being witness to such). This particular young lady seemed to be completely satisfied once she had made some sarcastic retort. (I believe it was my subconscious awareness of my duplication of such actions in my own relation to my sister—that I was getting too much of a "kick" out of being sarcastic—that I had become aware of its implications.) Her actions no longer annoy me and I found myself injecting a few remarks into her conversation with another recently, which went something like this: "Millie, I hope you don't think like you talk as far as real feelings are concerned. I believe it is from your mouth out and I conclude your bark is worse than the bite." She laughed as she walked toward my desk and said "You sound like the only person around here who understands me."

The second departure is that these records will be maintained by school pupils. Although at present lower age limits can only be guessed at, the method probably ought not to be tried with children below junior high school age. If the basic idea is tenable, these limits can be established in standard experimental fashion.

The specter of privatism might just as well be faced since it is, in any case, abroad. The fearful must defend their fears and we shall have to do the best we can, which now and again may not be very much. Ideally, a program of self-records or any program in this area might have its origin in discussion at teacher and PTA groups. School personnel and parents should grow together in understanding and acceptance of this type of program. The strong threats that drawing the shades have, in terms of what one's fancy fears might be exposed, must be taken into account.

THE INTERPRETATION OF DREAMS

The very use of these words may raise hackles. The beads of sweat may rise at the idea of so personal, difficult, and disconcerting a task. The idea may be too difficult, require too much skill on the part of those who attempt to impart it, and require too much to be learned by those who attempt to learn. The idea may be a very poor one; friends with whom it has been discussed shake their heads very doubtfully, but it ought to be considered. It does not necessarily mean that dreams will be produced and interpreted in the group situation. It could mean that the mode of understanding one's dreams might be taught. After all, it *is* a skill in understanding; many have been taught the

skill and have demonstrated that they can become quite good at it and that understandings gained have been very useful to them, sometimes phenomenally so. Other than to indicate that there are a number of major contributions in this area of experience, e.g., Bonime's *The Clinical Use of Dreams*, and Diamond's popular book *The Science of Dreams*, it does not seem fruitful to enter discussion of this fertile area for man's understanding of himself. If this area is explored in a school setting it will require competence of a type that needs no list of titles of books for assistance.

It is not proposed that the curriculum be made to include a course with the title of this brief subsection. Such material properly belongs in a framework which includes various aspects of self. Since dreams, like examination of anxiety-loaded behavior, can be a road to self understanding, this section might properly have been included in the notes on teaching the dynamics of behavior. It has been separated in order to highlight it. Nevertheless, the vehicle for self exploration is at hand in quite a few schools in the formal psychology courses and less formal group discussions of human behavior, personality, or understanding.

ON MONEY AND SKILLS

Friends who have seen this material have asked, even granting the pertinence of some points, who is going to provide the instruction and who will pay the bills? The answers are not comfortable, but they are simple enough. Such a program will cost money. But money is easier to come by than comfort. It is not really a problem. If we want this kind of program badly enough, we will provide the money. What we need to start with is the interest and conviction; ways to finance it will be found.

The problem of finding skilled instructors is in part related to budget. However, such a program should be very attractive to concerned workers who see little profit in ameliorative and curative procedures. The school can follow the example of other concerned groups in a time of competition for scarce skills and train selected faculty for the new roles they are to play. It can also call on mental health personnel even though they are in a very short supply, because this is precisely how scarce personnel should be used, where greatest influence can be exercised.

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To the Editors

LANGUAGE AND LEARNING

To the Editors:

In his article on "Indian Writing in English" (HER, Spring, 1964) P. Lal perhaps unwittingly confirms what Iyengar wrote about Indian writing in English in 1913 (i.e., "We are in rats' alley where the dead men lost their bones").¹ It is surprising that the approach of Indian (or foreign) scholars to Indian writing in English has not changed much since the works of Goffin Singh, and Whitworth were published.² And that was a long time ago.

It is, however, encouraging that the wider context in which an Indian Eng-

lish³ writer functions has changed, and he feels more "secure" and "accepted." The reasons for it are not that he feels that he is out of the "rats' alley" (to use Iyengar's words), but the educational and political situation in India has taken a favorable turn for an Indian English writer. For instance, in spite of the regional language loyalty, and political pressures in India, it has rightly been decided now that the English language will stay in India. (In fact English has a better hold in India now than it had before 1947.) Hence a creative Indian English writer can be sure of *some* Indian reading public, too. And, what

¹ See P. Lal, *Indian Writing in English*, H.E.R., Spring 1964, p. 316.

² Bhupal Singh, *A Survey of Anglo-Indian Fiction* (O.U.P. London, 1934); R. C. Goffin, "Some Notes on Indian English" S.P.E. Tract No., XLI; G. C. Whitworth, *Indian English* (Lahore, 1932).

³ I prefer to use the term *Indian English* (writing) to the terms "Anglo-India writing" (now used in a restricted sense), "Indo-Anglian writing," "Indo-Anglian writing," or "Indo-English writing." I think Indian English is contextually self-explana-

tory, and linguistically significant. It also makes it clear that the English language is used as a foreign language by Indians and it functions in those contexts which are "non-British" and "non-American." The term "Anglican" is misleading in another sense, too. It has theological connotations connected with the Church of England. (Cf. P. E. Dustoor, "Presidential Address delivered at the Seventh Session of the All India English Teachers Conference" Dharwar, 1956. Reprinted in *Shiksha*, April 1957, pp. 61-71.)

is more important, Indian writing in English has been recognized—haltingly but definitely—as an independent form of the “non-native” Commonwealth form of English writing. This puts an Indian English writer in a larger international literary setting with his distinct *Indian* characteristics.

But, even now, no serious research has been done in order to bring out precisely the *Indian* characteristics of Indian writing in English. I agree that we have anthologies and histories of Indian English writing (pp. 316-317), but the interesting and more crucial questions have still been left untouched or unanswered. Perhaps Indian English writing can claim better understanding (as the West Indies writing in English does) if the essentially Indian aspects of such writing are brought forth clearly.

I think the basic questions which need answers are: What are the features which contribute to the *Indianness* in Indian English, say, as opposed to the *Englishness* in British English, or the *Americanness* in American English? And how is the *Indianness* realized in the language-features and the content of Indian English text? Once we are clear about the basic issues we may profitably get involved in the polemics of the “new” and the “old” (pp. 317-318).

In other words, at this stage we may, for instance, ask: What are the features which mark Indian writing in English distinct from other “varieties” of English (native and non-native), e.g., American English, Australian English, Philippine English, West Indies English, etc? I am particularly thinking of the interesting question of the *Indianization* of the English language, both in its form and content. I would argue that the process of the Indianization of English has evolved an Indian style of English, and over the years, separate

registers and *restricted languages*⁴ of English have developed in India.

Without considering deeper motivations of linguistic and socio-cultural behavior and their interrelation, we may sum up the reasons for the Indianization of English in the following. First, in India, the English language functions as a foreign (or second) language, and is greatly influenced by the substratum(s) of the native languages. Second, English operates in those cultural patterns (*Contextual Units*) which are foreign in those parts of the world where it is used as a native language. I have discussed elsewhere in detail how linguistic and socio-cultural factors have contributed to the *Indianness* in Indian English.⁵

I would like to develop very briefly only one aspect of Indian writing in English, namely, the *Indianness* in the language features of Indian English texts. Perhaps I should mention here that my interest in Indian English is essentially linguistic, and I am mainly concerned with the *observation* and *analysis* of the “standard” Indian English writing and not with its *evaluation*. This is, I think, another way of looking at the fast growing Indian writing in English.

I shall use the term “Indian English writing” to mean that “variety” of English which is written by educated Indians as a foreign language. The term is not to be confused with Babu English, Butler English, or what Lal calls, *arré bhai slop* (p. 317). Further—

⁴ These are used in a technical sense, see M. A. K. Halliday, A. McIntosh, P. Stevens, *The Linguistic Science and Language Teaching*, Longmans (London, 1964) pp. 87-98. See also my “Indian English: A Study in Contextualization” in *In Memory of J. R. Firth*, (Longmans, London: in press.)

⁵ See my “Indian English: A Study in Contextualization” (Cf. fn 4). Also “The *Indianness* in Indian English” (to appear).

more, I shall restrict it to the written medium of those educated Indians who use the language with perfect competence. Such users of English may be termed "standard" Indian English writers.⁶

It will be shown that the Indian idiom of English has acquired certain Indian characteristics due to the following linguistic and non-linguistic reasons. First, sentences, phrases, compounds (or single words) of Indian languages are transferred to Indian English writing, say, for example, the following formations: *may the vessel of your life never float on the sea of existence* (G, 78);⁷ *cherisher of the poor*, (TP, 37); *brother-annointing ceremony* (Kanth, 56); *(you) cater of your masters* (C, 18) etc. Second, words from Indian languages and English are blended to form hybridized (or mixed) formations, e.g., *canal-bund* (S and R, 281); *coconut-payasam* (AD, 8); *college-babu* (F of F, 33); *miss-sahib* (VG, 81); *police-jamadar* (Kanth, 29); *double-roti* (C, 261); *burning-ghat* (BH, 207); *goonda-looking* (1001 Nights, 129); *tonga-driver* (VG, 36); *ahimsa soldier* (WM, 78).⁸ Third, English words are grouped together in such combinations (collocations)⁹ which extend the association of lexical items from their normal association in the natively used forms of English. This then is the deviation in

the use of vocabulary items with other vocabulary items at the *lexical level*. E.g., *cousin-sister* (RH, 29); *cousin-brother* (F of F, 131); *cow-worship* (V of G, 122); *salt-giver* (Kanth, 32); *dung-cakes* (N in S, 47); *sister-sleeper* (V of G, 130). Fourth, new formations are coined to make language function in those typically Indian contextual units which are "non-American" and/or "non-British," because such contexts are absent in those cultures. Such "context restricted" formations naturally stand out as "non-native" because the context under description in Indian English is "non-native," e.g., *brother-annointing ceremony* (He Who, 160); *car-festival* (OR, 15.7.59); *forehead-marking* (Mrs. S, 206); *hair-cutting ceremony* (Kanth, 56); *sacred-thread* (V of G, 122); *nine-stranded thread* (He Who, 45); *rice-initiation ceremony* (SMH, 30).

Note also the common tendency to "delete" items in Indian English writing. There are cases in which a native user of English would normally use a clause or a group, whereas an Indian would tend to apply the process of "deletion." For example, a structure with the constituents noun + qualifier (preposition + noun) is reduced to modifier + head construction, e.g., *a bunch of keys* becomes *key bunch* (AD, 178). Other such examples of "rank reduction" are *America-returned* (F of F, 105); *shoe-shower* (Kanth, 131); *god-love* (UN, 205); *welcome address* (IE, 14.8.59).

I prefer to use the term *Indianisms* for all those formations which are formally and/or contextually Indian. I consider that Indianisms are cardinal to Indian writing in English, especially fiction, and the time has come when a semantic and grammatical study of such formations should be made. Following Lal we may say that Indianisms are "significant because Indian" (p. 319).

In Indian English writing I would

⁶ My use of the term Indian English writing would include leading English newspapers of India, and the writings of poets, novelists, essayists who use English in Indian socio-cultural and linguistic setting.

⁷ The abbreviations used here for the titles of Indian English texts have been explained in my above mentioned earlier papers.

⁸ Note that this does not include Indian loan words in English.

⁹ See M. A. K. Halliday, "Categories of the Theory of Grammar," *Word*, Vol. 17, No. 3 (1961), p. 276. Also see my *op. cit.*, "Indian English."

system are not age-timed, (b) that it is the ordinal relation among stages rather than the relation of isolated stage to age that is important in Piaget's view, and (c) that the possibility of accelerating conceptual development is not precluded in Piaget's theory. Whether or not Piaget's empirical work has been directed towards the realization of such a possibility and whether Vygotsky was more sanguine than Piaget about accelerating development are not germane to the criticisms I advanced of Professor Carroll's review. Doubtless, Piaget, whose heart has always been in epistemology was, and is, more inclined to *interpret* the child's behavior in terms of structural principles, whereas Vygotsky, having read his Marx on Feuerbach, was more interested in *changing* the behavior.

To my major criticism, viz., that he has shown a misunderstanding of Vygotsky's concept of development and that he has tended with many American psychologists to collapse the concepts of development and evolution into mere change, Professor Carroll demurs: "I do not think of development and evolution as processes that are merely a function of time, and I would not wish to convey the impression that Vygotsky held such a view." He then invites me to present an "undebased" concept of development.

Before I accept the invitation, let us see if my criticism was warranted. In Professor Carroll's original review, we find the following:

We hardly need to be supplied with further 'experimental evidence that word meanings undergo *evolution* during childhood' . . . that Vygotsky offers as one of his major contributions. For whether we mean by 'word meaning' the institutionalized correspondence between a symbol and some class of referents, or the 'media-

tional process' that is said by some psychologists to occur in the individual in response to a word, we know rather clearly, at least in principle, the conditions under which word meanings *change*. In point of fact, Vygotsky does not report in any detail his experimental evidence to the effect that word meanings *change*. (P. 247, my italics).

I submit that both in his terminology and his allusions to what he takes to be relevant research Professor Carroll reveals precisely that conflation that I criticized.

Now, to an undebased concept of development. I have, with Heinz Werner presented such a concept in detail elsewhere (*American Anthropologist*, 1956; *Symbol Formation*, Wiley, 1963). In essence, we have maintained that the notion of development entails novelty of structure and novelty in modes of operation of a system culminating in increasing differentiation and hierarchic integration. (See also von Bertalanffy, *Modern Theories of Development*, Oxford, 1932, pp. 121 ff.)

As Ernest Nagel has put it:

. . . the term is reserved for changes which are not merely irreversible, or which yield only a greater numerical complexity; those changes must in addition eventuate in modes of organization not previously manifested in the history of the developing system, such that the system acquires an increased capacity for self-regulation, a larger measure of relative independence from environmental fluctuations. This is, at any rate, what embryologists and evolutionists have in mind when they take progressive differentiation and self-maintaining organization as the essential marks of development . . . The connotation of *development* thus involves two es-

sential components: the notion of a system possessing a definite structure and a definite set of pre-existing capacities; and the notion of a sequential set of changes in the system, yielding relatively permanent but novel increments not only in its structure but in its modes of operation as well. ("Determinism and development" in D. Harris, ed., *The Concept of Development*, Minnesota, 1957, pp. 16f.)

This view of development has a close kinship to that advanced by Marxists (see M. Cornforth, *Materialism and the Dialectical Method*, International Publishers, 1953) and accepted by Vygotsky. American neo-associationists—and most of those who have talked about mediational processes in recent years fall within this group—do not have such a concept of development. They do not treat mediation processes as new principles of organization, new modes of operation, new "rules," but rather as covert responses on the same categorical level as other responses (See Goss, Osgood et al.). Stuck with a "well-knit technical sublanguage," infused with "patterned resistances to widely divergent points of view" (Whorf), they introduce "old epicycles numberless in vain." It is for this reason that I maintained, contra Professor Carroll, that though there have been many investigations in the past decade concerned with so-called "mediation processes," there have been almost no studies pertaining to the evolution or development of word-meanings in Vygotsky's sense in the years since the first publication of Vygotsky's book.

BERNARD KAPLAN
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A COMPUTER-MEASUREMENT SYSTEM FOR GUIDANCE

To the Editors:

It is refreshing to learn that the guidance field has another young rebel. If a scientific field ever needed deliverance from tradition and folklore, the counseling and guidance movement is that field. Cooley's provocative paper (HER, Fall, 1964) deserves consideration and action. The title of his paper, "A Computer-Measurement System for Guidance," might have been "How to Separate the High School Counselor from His Archaic Training and His Endless Paper Work so He Can Do Something Useful." Unfortunately, journal editors demand short titles.

Cooley's explanation of the need to augment the services and time of our current corps of guidance workers is a crucial assumption for his proposals. He documents that assumption briefly, but impressively, and I take his argument as valid.

Cooley might have added that the shortage of guidance personnel is increased further by their addiction to the interview. Unfortunately, the guidance movement, like psychiatry in earlier years, has been unable to see the ineffectiveness of the interview as the chief guidance tool for large student populations. Consequently, the guidance movement has made only feeble efforts to cope with student problems in better ways. Instead, as in psychiatry, they have talked about training more people to use the same old tools, although the typical counselor does not have time even to get his tools out of his brief case. Moreover, an increasing store of research knowledge suggests that the interview, even under ideal conditions, is an ineffective way to help others.

Cooley's proposals are, in essence, a way to augment the potency of the current efforts of guidance workers,

both by relieving them of routine tasks which typically bury them in clerical routine, and by relieving them of some complex tasks which few guidance workers, or anyone else, could perform quickly, accurately, or inexpensively. His specific proposals to identify and assist students with guidance problems, college selection decisions, experience needs, appear eminently reasonable. Cooley's plan for identifying the student in need of guidance has its forerunner in the Your Educational Plans (YEP) materials developed by Stouffer and O'Shea, but Cooley has taken several additional steps—automation of the clerical task itself *and* the simultaneous manipulation of many variables including the production of probability statements for everyday use. His express plan to tie student information to real student problems and decisions represents a needed orientation. Too many guidance programs consist of elaborate and redundant assessment projects conducted at considerable expense, which, in their potential uses, are not focussed upon student realities; nor are the potential values of such a program fully exploited in any direction. They resemble a thorough physical examination without a perceptive plan for treatment.

At this time, the weakest aspect of Cooley's proposal is the limited complexity of its theoretical base. His main assumption, "that different plans are appropriate for different people," is really a principle of human behavior which no one can doubt. Similarly, his plan to organize assessment information is only one of several useful ways to do the job.

The content of his proposed student assessments is unclear, although we can imagine the use of many simple tried and true techniques. We need, I think, most of all, a theory of experience before we can program appropriate ex-

periences for the resolution of vocational decisions and for other purposes. Such a theory also needs to be an integral part of a theory of vocational decision and planning.

As Cooley indicates, the ideas and tools are accessible and practical, but they require use and experimentation for evaluation and development. To persevere with the popular orientation to guidance is largely a fruitless, self-destructive enterprise. Without a way to multiply the staff time and skills of guidance workers, they will continue to be a rather impotent force in education.

When Cooley's proposals are added to the recent contributions by Krumboltz, Magoon, Seeman, and Gilbert, we have the beginnings of a new guidance movement oriented toward the problems of the sixties rather than the thirties. For example, Krumboltz in a series of important studies has demonstrated that you can manipulate students to seek vocational and other needed information. Magoon has developed tapes and records to provide information to students in order to save valuable staff time. Seeman's interview tapes provide a relevant learning situation for adolescents without the use of extensive counselor time. And Gilbert et al. have developed programmed texts for assisting students with guidance problems.

Before these original efforts can be expected to have much useful impact, it will be necessary to cure two recalcitrant diseases now prevalent among guidance workers: professionalism, with its addiction to inefficiency and gracious living; and misguided humanism, with its anti-numerical and anti-mathematical biases. This task may be more difficult than the creation of a science of experience and decision.

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To the Editors:

In commenting on "A Computer Measurement System For Guidance" written by William W. Cooley in the Fall 1964 issue of this publication, I wish first to state that there is need for more such articles. For too long we have been holding dialogues on the same problems and allowing guidance to slip into a closed system of circular action on the same set of problems. The computer sciences do indeed offer major opportunities for fundamental and profound changes in education and specifically in the area of guidance. Several points make this article an important contribution, and it is to these I shall address myself for the remainder of these comments:

1. Mr. Cooley makes a point of emphasizing measurement as differentiated from process. This is important because for too long we have been using process as a device to avoid sharp, precise thinking in the area of assisting young people. For example, there is evidence that indicates approximately 90% of the activity that occurs between a student and a counselor in an educational counseling situation can be defined and coded to allow computers to perform the same function. This would seem to indicate that what we often have called *process* is in reality *technique*. We are being forced by such computer progress to recognize and face the real process: that 10% of activity between counselor and student beyond the reach of the computer.
2. The article also brings computers into focus for guidance in one role that is workable and in existence at the present time, namely statistics. For example, without any extension of statistical pro-

cedures for guidance, computers now easily handle multivariate data.

3. Perhaps the most important aspect of the article is something that is implied. The history of science can be viewed as what I like to call a push-pull progression. There are times when man must wait for technical development to permit the testing of his ideas. At other times technology waits for the generation of ideas that will adequately utilize existing technology. Each phase motivates and generates a next step. Today the level of computer technology awaits new ideas on the part of guidance people. The Cooley paper represents an example of such conceptualization attempting to utilize the newer technologies now available to us. The significance of the relationship between guidance and the computer sciences leads us to recognize where our focus must be (and I think this is a terribly important point); namely, to explore new dimensions of guidance. Strategies and techniques impossible in the past are now made feasible by such procedures as simulation and real time analysis. Our breakthroughs in answers can only follow after our breakthroughs in problem-solving approaches.
4. Another important aspect of the Cooley paper is the emphasis on follow-up data as a source of important and worthwhile information. Such data represent empirical evidence of what is actually happening to students as at least a partial result of their earlier educational experiences. Given the actual "what," research has a much better chance of deter-

mining some of the "whys," and guidance is then perhaps better able to serve students.

One can take issue with some aspects of the article, but these are a matter of extent rather than difference in "kind" and serve best perhaps to point up the range in thinking in the field at this time. For example: a) Computer sciences permit us to deal with the concept of multicausal aspects of behavior by way of multivariate analysis, but our approach should not stop with existing statistics. The computer permits us to look at new techniques in statistical procedures building in, for example, temporal dimensions which are so critical in assessing the relative importance of guidance data. b) While we can be interested in new statistical procedures, our primary concern must be with the issue of data reduction so that we may determine what is the relevant information from which adequate and proper behavioral models may then become possible. c) The paper discussed the use of national and regional guidance data. There is evidence to indicate that perhaps we can do much better in terms of probabilities if we deal with local data. Not to be overlooked is the importance of frequent updating of probability data, even within individual school districts. This is necessary if the information is to have meaning for the students.

In closing these comments I should like to note that Mr. Cooley did not delve into the mystical blue sky of the future; what he proposes is now possible and feasible. Indeed, some activity along these lines is occurring. A prime example is the work of the California State Department of Education in developing a state wide educational information network. The heart of the network will be a series of regional computer centers connected by tele-

phone lines. Work is well along on this project. The first two centers will be operational in July, 1965, and will handle the types of information discussed by Mr. Cooley.

It also occurs to me that Project TALENT offers the best avenue at the present time for any systems analysis of education on a national basis. Such an effort would perhaps refocus guidance efforts from today's essentially inductive posture to a more deductive procedure. Finally, any real test comes not at the college but in the school system itself. The school district represents a living laboratory in which these and other ideas must be tested before we know their full effectiveness.

To this last point I can say that probability data used with high school students do change their decisions, much as Mr. Cooley expected. In our case, students using local probability data make more realistic decisions than when using only general guidance information to make their decisions.

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SECONDARY SCHOOL-LEAVERS IN GHANA

To the Editors:

Professor Philip J. Foster's valuable article (H.E.R., Fall, 1964) should be noted by the human resource development planners who have, he maintains, often assumed a much too close relationship between educational and occupational structure. They have also tended to believe (which he does not mention) that terminal secondary education was the most important educational key to economic growth. Foster shows, however, that in Ghana the value of a secondary education is depreciating,

that satisfying employment is not easy to come by, and that job opportunities in the modern sector of the economy have expanded much less rapidly than school places.

This highlights an important question in development theory: how much does education contribute to economic growth? It has frequently been pointed out that, during their periods of most rapid growth, education followed in the wake of the economic development of the European countries. Nevertheless, it is now widely held that education is a stimulant to development. The evidence is, of course, complex and confused, but in the case of Ghana it would certainly appear that the secondary school leavers studied by Professor Foster are not a key element in development. By the same token, there is not the acute shortage of educated persons which is often said to hold back development. This illustrates one of the many vicious circles of development problems. The poorer countries are poorest in job opportunities through which, if they existed, wealth would be created, thereby creating more job opportunities, and so on. Merely to educate people does not make employment for them—that much is obvious. However, if only enough persons are educated to fill existing or projected posts, it is clear that the educated population, as such, plays little part in the acceleration of growth. Indeed, if the production of educated persons greatly exceeds the number of jobs, the ensuing unemployment (as compared with the covert under-employment habitual to under-developed societies) and disaffection may have a positively damaging effect on the economy. (This is not to say, and here Professor Foster's caveat is echoed, that there may not be "indirect" returns to educational investment. For example, in the long run disaffection and disappointment, however disrupt-

tive in the short term, may loosen the rigidities of a non-developmental social system.)

One immediate response to these arguments would be to return the responsibility for development strategy, including human resource development, squarely to the economists. It might be argued that they, having chosen the most suitable economic policies, should then devise the requisite manpower policy. But this is really impracticable. Throughout the world, education is a matter of key political importance. It would hardly anywhere be possible (even if technically feasible) to subordinate its growth strictly to a purely economic plan. Moreover, to gear education entirely to meeting manpower needs would deny its traditionally vital roles in relation to both individual and society.

In many discussions (excluding Professor Foster's) on education and development, education is treated as a somewhat inert, given quantity. Little is said about either quality or subject matter. Yet, as everybody knows, it is not the mere fact of going to school for *x* years, but what was taught during those years and how well, which makes the difference to an individual's career. If education is to contribute, *inter alia*, to development, we must pay attention to both curriculum and quality; quantity and duration are not enough. This is of particular importance when we think of the possible role of education in creating employment rather than merely training enough people to fill existing or projected jobs. Indeed, development and the creation of employment are inseparable. If education is to avoid the dangers well pointed out by Professor Foster and by the same token to promote development, it should be specifically geared to turning out young people who not only possess useful skills, but also the qualities of

mind, the spirit of enterprise and innovation, which ensure that they are used purposefully, not merely to fill employment slots, but also to create them. Anyone who knows Ghana and, indeed, West Africa as a whole must be aware of the energy of the people, including their entrepreneurial capacity. At present, Ghanaian secondary education is of a type which prepares students best for the tasks into which, for the most part, they go—teaching and clerical work. It is possible, however, that a more comprehensive form of improved secondary education, partly geared to the economic potentialities of cottage industry, craftsmanship, and entrepreneurial activities of various sorts, could contribute much more actively to the economy. It is of the greatest importance that secondary-school graduates should not be entirely dependent on existing (and somewhat restricted) openings for their employment but should be given some of the tools needed to forge new employment for themselves. Unless this happens, and on a fairly massive scale, the development effort will surely flag.

Professor Foster is to be congratulated on an important empirical study in a field where much work is still conjectural and on marshalling his facts in such a way as to question hallowed assumptions. This is the greatest service a scholar can render.

ADAM CURLE
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A COMMENT ON WHETHER TEACHING IMPLIES LEARNING

To the Editors:

Both Smith¹ and Scheffler² define *teach-*

¹ Smith, B. Othanel, Ennis, Robert H., *Language and Concepts in Education*, Rand-McNally Co., Chicago, Illinois, 1961.

² Scheffler, Israel, *The Language of Education*, Charles C. Thomas, Springfield, Illinois, 1960.

ing in such a way as to exclude the implication of learning when *teaching* is used in the present tense. Does teaching imply learning? Is the Scheffler-Smith definition a departure from the usual use of the word? The point seems worth clarifying.

There are two senses of the verb to teach concerning which there is no dispute. An example of the first of these is "What does John do?" "He teaches." "Where is John?" "He is teaching." In this sense of teach or teaching, we can all agree that it does not imply learning. Let us call it (with thanks to Professor B. P. Komisar) an *activity-naming* sense. In a second sense, I believe we can all agree that teaching does imply learning. "John taught algebra to Bill." If Bill didn't learn any algebra at all, then John did not teach algebra to Bill. After Scheffler, let us call this a *success* sense.

The disputed sense of teaching is found in the case of John teaching algebra to Bill right now. When we said that John taught Bill, we were making a kind of extended performative utterance. We were promising that Bill did learn some algebra from John. But the crucial case is in the right here and now! John is teaching algebra to Bill. Is it, or is it not, odd to say that Bill isn't learning any algebra from John? Perhaps today we will let it pass (and perhaps we will not let it pass) that John is teaching algebra to Bill, and Bill isn't learning any algebra from John. If Bill doesn't learn some algebra from John fairly soon, we will be entitled to say, "I wish I knew what John is doing in that class, because he certainly isn't teaching algebra to Bill." At some point the teaching here and now, which is the disputed case, blends into the *taught*, back then, about which there is no dispute. It appears to this observer that when Smith and Scheffler define teaching (in the disputed sense)

as not implying learning, they are making a stipulative definition. The definition is stipulative because we do not ordinarily say that, "John is teaching algebra to Bill, but Bill is not learning any algebra." We would say, rather, that, "John is trying to teach Bill." If we say, "John is teaching algebra to Bill," and some one says, "Do you mean, 'John is trying to teach algebra to Bill?'" and we answer, "No, I mean John is teaching algebra to Bill," we

are making an extended performative. We are promising or guaranteeing that Bill is learning some algebra.

Perhaps Smith and Scheffler have confused Sense #1, *activity-naming*, with Scheffler's *intent* sense of teaching, which seems to correspond with what I have called an extended performative.

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Book Reviews

WINNETKA: THE HISTORY
AND SIGNIFICANCE
OF AN EDUCATIONAL EXPERIMENT.
by Carleton W. Washburne
and Sidney P. Marland, Jr.
Englewood Cliffs, N.J.: Prentice-Hall,
1963. 402 pp. \$7.50.

Nothing is more striking about the progressive education movement, especially during its heyday in the 1920's and 1930's, than its diversity. The movement literally defied definition, and with very good reason: it simply never was the neat ideological whole that either its proponents or its critics made it out to be. From the very beginning, it was at best a loose congeries of reform efforts, each with its own program and outlook; and indeed, as late as 1915, when the Deweys set out to portray some of the leading progressive innovations in *Schools of To-Morrow*, they were forced to enter their well-known caveat:

This is not a text book of education, nor yet an exposition of a new method of school teaching, aimed to show the weary teacher or the dis-

contented parent how education should be carried on. We have tried to show what actually happens when schools start to put into practice, each in its own way, some of the theories that have been pointed to as the soundest and best ever since Plato, to be then laid politely away as precious portions of our 'intellectual heritage.'

Even after the organization of the Progressive Education Association in 1919, there was little agreement on what progressive education actually was and what it meant. For some, such as Caroline Pratt of New York City, it implied a kind of expressionist pedagogy that would somehow free the creative potential of the child. For others, such as Marie Turner Harvey of Kirksville, Missouri, it was literally an anti-poverty program, a series of school activities pointedly designed to regenerate the social and economic life of the local community. And for still others, such as Carleton Washburne of Winnetka, Illinois, it meant a reorganization of the curriculum that would

encourage children to move through the various subjects at their own pace. It was Miss Pratt's version, no doubt, that attracted the cartoonists ("Teacher, do we have to do what we want to do today?"); but it was Washburne's that exerted the most general and lasting influence.

Washburne has given us several useful accounts of his work at Winnetka, from his accession to the superintendency in 1919 to his departure for military service in 1943.¹ He came at the invitation of a board determined to head off the founding of a private school in Winnetka by making the public schools irresistibly attractive to the community's leading families. The board had initially consulted with William Wirt, whose reforms in the Gary, Indiana, schools had been nationally hailed as the quintessential example of progressive education. Wirt, quite naturally, recommended many of the innovations he had successfully pioneered in industrial Gary: manual training, nature-study, shops, and playgrounds. Not surprisingly, they proved somewhat less relevant to suburban Winnetka. Then, in a shift that tells us much about what happened to progressive education after World War I, the board turned to Frederic Burk of the San Francisco State Normal School; and Burk recommended his young assistant, Washburne. ("You're a very young man. Winnetka is a very small town. If you fail it won't make a big splash. I guess I'll recommend you.") At the age of twenty-nine, Washburne arrived in Winnetka, bear-

ing an idea destined to work a pedagogical revolution.

What was the idea? Simply, that there is no need for every youngster to proceed through the curriculum at the same pace. The idea, of course, is as old as formal education; but as the Deweys suggested in *Schools of To-Morrow*, it had to be rediscovered, reformulated, and made applicable to the vast public school system of twentieth-century America. And it was to this task of restatement and application that Burk and his associates had turned. Aware of the diversity of background, aptitude, and intelligence usually present in any average American classroom, they had set out to prepare "self-instruction materials" for each school subject, assignments and explanations so simple and clear that any child could to large extent teach himself. In effect, they had resolved to *program* the curriculum, abandoning the "lock-step" associated with an "average" class proceeding through "average" materials at an "average" pace, and shifting the burden of teaching from repetitive exposition to individual assistance and appraisal.

In Winnetka, Washburne applied these techniques to the so-called tool subjects (reading, writing, spelling, grammar, and arithmetic), organizing the remainder of the curriculum (science, social studies, the arts, and physical education) around group projects that would "give motive and meaning to the tool subjects and give them practical application." The combination became the heart of the Winnetka Plan, and the basis for a reform of the entire school system (which ran from kindergarten through the eighth grade). Since decent "self-instruction materials" were not available, Winnetka's teachers produced their own: workbooks, flash cards, diagnostic tests, and graded reading lists. They designed

¹ See Carleton Washburne, Mabel Vogel and William Gray, *A Survey of the Winnetka Public Schools*. Bloomington, Ill.: Public School Publishing Company, 1926; Carleton Washburne, *Adjusting the School to the Child*. Yonkers: World Book Company, 1932; and Carleton Washburne, *A Living Philosophy of Education*. New York: John Day, 1940.

"life-like" projects, such as a livestock corporation (rabbits!), an apiary, and a school newspaper; they organized clubs of every sort and variety; and they introduced student government into school and classroom. Once the work had been individualized, special classes for the physically and mentally handicapped were abandoned, to be replaced by a system-wide child guidance clinic. Nursery classes were organized for four-year-olds, and housed in the junior high school to serve as a laboratory for the study of family life. Since teachers obviously needed special training to participate in the new programs, a Graduate Teachers College of Winnetka was established, in cooperation with the Francis W. Parker School and the North Shore Country Day School. And when the time came to erect a new elementary school, Lawrence Perkins (currently of Perkins and Will) and Eero Saarinen were retained to create a building specifically designed to reflect and advance the Winnetka program. The work was fascinating, and it is no wonder that when Washburne left in 1943 (he did not return after the war, accepting instead the headship of the Department of Education at Brooklyn College), Winnetka had become one of the showplaces of the progressive education movement.

Washburne's contribution to *Winnetka: The History and Significance of an Educational Experiment*, is essentially to retell the story of his superintendency. As history, the account is largely unsatisfying: there is little not previously covered in *A Living Philosophy of Education* (1940); Washburne asks no new questions of his experience; and one looks in vain for the particular factors, other than the boundless energy of the superintendent, that made Winnetka more receptive to educational reform than dozens of other wealthy suburbs with equally committed school

boards. It is rather as a prologue to Sidney Marland's contribution that Washburne's acquires value. For despite its subtitle, *Winnetka* is not primarily a book about the history and significance of the "experiment" that every aspiring teacher comes upon somewhere in his first education course; it is really a book about the revival and transformation of that "experiment" once it had gone stale. And Marland, as superintendent from 1956 to 1963, was the leading figure in the drama.

Winnetka may have had four superintendents between 1943 and 1956, but there is no doubt that Marland took over a system still very much "under the splendid shadow of C.W." He also came to office at a time when the post-war attacks on progressive education had reached something of a peak. Given this situation, he really had three alternatives: he could seek to preserve and defend the Washburne tradition; he could set himself in opposition to it; or he could set out to reconstruct it. He chose the last, advising the teachers in his initial meeting with them:

I think that many of the good things to which we have attached pedagogical names have always been practiced by good teachers, whether they were adherents of a particular school of educational philosophy or not. [Shades of the Deweys!] I think we are, in this decade, reconciling the strength of the past 30 years and discarding the weaknesses. I think that great teaching today cannot be neatly catalogued as of this or that pedagogical cult. I think that great teaching is a product of a given teacher, at a given time, with given children, and it possesses characteristics of the child-centered theme and "integration" and "community," and certainly it possesses what we once disparaged as sub-

ject matter and academic discipline.
(p. 181-2)

How does a superintendent reorient a school system that has been a pedagogical showplace for a generation? There are shelves of textbooks on the problem, most of them by authors who have never had to face the task. Marland early committed himself to working closely with his teachers (interestingly enough, via techniques pioneered by the progressives in Denver and elsewhere); but he never abdicated his responsibility to lead. There were the inevitable meetings, reports, and manifestos, as superintendent and faculty—and later, lay citizens—examined the Winnetka tradition to determine what was still valid and what needed to be changed. By 1963 Marland could write:

The spirit of faculty inquiry and experimentation, the high concern for individualized instruction through locally written materials, the encouragement of creativity among children, the emphasis on social learnings and attitudes, the devotion to good mental health practices, self-instruction and responsibility for self-discipline on the part of the pupils—all remain powerful and specific characteristics of these [Winnetka's] schools. The principles and underlying philosophy remain substantially unchanged. The methods, objectives, procedures and techniques have in some cases been retained, but in some cases have been substantially modified. (p. 199)

Whether one can change methods, objectives, and techniques without changing the philosophy associated with them is, of course, a moot question. Even so, there is no denying that the modifications were substantial. Marland lists them in an extraordinarily re-

vealing diagram, keyed to Washburne's exposition in the first half of the book. Taken together, they indicate a good deal about the shift in American educational thought after World War II (to say nothing of the shift in what Winnetka demanded of its schools). The key change, not unexpectedly, was a reassertion of the school's primary concern with intellectual development.

"We assume," Marland writes, "that parents and teachers now comprehend that a youngster comes to school in all his parts—emotional, social, physical, and intellectual. We give unremitting attention to all these parts, but we accept as our unique and primary concern the development of the intellect." (p. 208)

Specifically, this meant higher expectations in all the major subjects at every grade level, and a revised balance between creative activity and formal learning. It also meant the separation of systematic science instruction from the social studies (which were still, unfortunately, to serve primarily as a vehicle for "social learnings"), the partial segregation of the gifted, and the establishment of a learning laboratory in the junior high school.

Yet, in all of this, certain fundamental commitments of the progressives remained central. Thus, a statement entitled "Beliefs and Objectives of the Winnetka Schools"—incidentally, a statement remarkably free of the usual clichés—gave substantial attention to the inculcation of values, the fostering of good health, and the nurturing of aesthetic sensibility. And with respect to intellectual development, the document proclaimed:

The learning of right answers is not enough. . . . Beyond answers alone we must help children ask right ques-

tions, and discover their answers through creative thinking, reasoning, judging, and understanding. We must help children know that learning is its own reward, uncluttered by momentary symbolic rewards for accomplishments or penalties for failures. (p. 235)

Marland completes his account of seven years of "curricular, organizational, and philosophical upheaval" with a statement of faith. The great reappraisal of the 1950's, he asserts, did not repeal the progressive revolution; rather, it exposed some of the weaknesses and anachronisms in progressive thought and practice, and sought new solutions to new educational problems. "It has been rightly observed," he goes on to say,

that the schools rarely discontinue an obligation. There is an eternal accretion of new tasks and expectations, calling for increased teacher competence, efficiency, and sense of balance. In our present preoccupation with academic excellence, we are in no way reducing or compromising our historic devotion to the social, emotional and physical learnings. We accept our *increased* responsibility for an increased degree of intellectual fulfillment, without subtracting other components of the curriculum. (p. 357)

He concludes with Toynbee's oft-quoted remark that ours could well be the first age in history in which men "dared to think it practical to make the benefits of civilization available to the human race." No doubt, Dewey and his contemporaries, who first dreamed the dream of "democratizing culture," would have nodded enthusiastic approval.

One can carp about Marland's ac-

count, just as he can about Washburne's: actually, neither is sufficiently concerned with the philosophical and political context in which education necessarily proceeds. But this fact notwithstanding, the significance of the Washburne-Marland volume goes far beyond the continuing reform of a single reform-oriented school system. Some years ago, I ended a study of the rise and fall of progressive education with the somewhat paradoxical conclusion that progressive education as an organized movement was dead, but its ideas retained an inescapable relevance to the contemporary American scene. What was needed, it seemed to me, was a reformulation of those ideas in the context of postwar America. That reformulation has yet to come, though it is already under way, notably in the writings of John Gardner, Jerome Bruner, Edgar Friedenberg, and Christopher Jencks.² (I do not include Paul Goodman, who appears to have contented himself with restating the doctrines of progressivism and urging Americans to complete the "unfinished revolution";³ nor do I include Carl Hansen, whose claim to have worked out a "new progressivism" via the "Amidon Plan" strikes me as patent nonsense.) The

² See John W. Gardner, *Excellence*. New York: Harper, 1961; and *Self-Renewal*. New York: Harper & Row, 1964; Jerome Bruner, *The Process of Education*. Cambridge, Mass.: Harvard University Press, 1961; and *On Knowing*. Cambridge, Mass.: Harvard University Press, 1962; Edgar Z. Friedenberg, "The Social Role of the High School," *College Board Review*, Winter, 1963, pp. 30-6, and also his recent essays and reviews in *Commentary* and the *New York Review of Books*; and Christopher Jencks's sundry essays in *The New Republic*.

³ Paul Goodman, *Growing Up Absurd*. New York: Random House, 1960; and *Compulsory Mis-Education*. New York: Horizon Press, 1964.

⁴ Carl F. Hansen, *The Amidon Elementary School*. Englewood Cliffs, N.J.: Prentice-Hall, 1962, pp. 65-6.

ultimate significance of the Washburne-Marland volume is that it takes us another step toward that reformulation, and indeed, toward viable educational policies that are both consonant with the best in our tradition and appropriate to contemporary needs.

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STABILITY AND CHANGE IN
HUMAN CHARACTERISTICS.

by Benjamin S. Bloom.

New York: John Wiley and Sons, Inc.,
1964. 237 pp. \$7.00.

Professor Bloom has written a meritorious book, albeit an unsatisfying one. The merit of his work resides in its high purpose. He has endeavoured to formulate a statistical theory of the development of human traits, and to test the theory against the evidence offered by the many longitudinal studies in the literature. The theory is ingenious and engaging. It represents the kind of pioneering which is needed from distinguished senior professors of education if their juniors are to be led in courageous assaults on lofty objectives. Young educational researchers cannot afford to ignore this book, for it opens up a new country to exploration. If it is unsatisfactory in its incompleteness of argument and its over-generalization of ideas and evidence, it manages to propose an amazing number of research problems. We may expect a torrent of dissertations derivative from this book.

The data of the study are test-retest correlation coefficients over long periods of time, borrowed from published longitudinal studies. The author has manipulated these data in an effort to muster

support for three theoretical propositions, which bear quoting:

1. The relation between parallel measurements over time is a function of the levels of development represented at the different times.
2. Change measurements are unrelated to initial measurements but they are highly related to the relevant environmental conditions in which the individuals have lived during the change period.
3. Variations in the environment have greatest quantitative effect on a characteristic at its most rapid period of change and least effect on the characteristic during the least rapid period of change. (p. vi)

The first proposition assumes that development is an additive process in which increments accrue over time to increase a starting amount of a characteristic. There is a lengthy discussion of the evidence on a trait which probably does develop in this way, and if the reader feels he is learning more than he wants about the predictability of height at later ages from earlier measures of it, he should bear with the author, and in fact bear down on him in Chapter 2, because the methods of adjusting, interpreting, and predicting test-retest correlations described here are used repeatedly in later chapters. These methods are applied successively to test-retest correlations for intelligence, school achievement, interests, attitudes, and other personality traits, and represent the basic methods of the book. The author admits that his "interest in physical characteristics . . . is less for their developmental features *per se* than for their utility as models for the analysis of other types of growth." (p. 18) Using the development of height as a model, the author formu-

lates the "Overlap Hypothesis," which sees the test-retest correlation as an index of the proportion of the mature growth which was already present at the earlier time. If the Overlap Hypothesis is true, a test-retest correlation is actually an example of a part-whole correlation, and the author views it as such. Since he offers no derivation or reference for his important part-whole equation on page 26:

$$r_{x_1 x_2} = \frac{\sigma_{x_1} r_{x_1 [x_2 - x_1]} + \sigma_{x_2} r_{x_2 [x_2 - x_1]}}{\sigma_{x_2}}$$

and he misreads his own equation at the top of page 27, where he identifies the second term on the right as a regression coefficient, which it most emphatically is not, the reader should consult McNemar's derivation and discussion (Q. McNemar, *Psychological Statistics*, Third Edition, N.Y.: Wiley, 1962, (158). Solving McNemar's formula (10.26) for $r_{x_1 x_2}$ demonstrates that the author's "regression coefficient" has the "wrong" standard deviation in the denominator for good reason. The algebra is correct; the interpretation is not.

While the reader has his McNemar open to page 158, he should read pages 155-160 carefully. Before he has finished *Stability and Change* he may feel that its author should have taken the "reliability of difference scores" more seriously, and should have given more thought to the implications of his part-whole equation. If, as the author assumes, the correlation of gains with original scores is zero, then the standard deviation for the trait must *increase* with the passage of time. Nowhere does he report actual trends of variances, but this is a real possibility, if not a likelihood. Decreasing variance requires negative correlation of original and gain scores. The author actually has evidence of such negative correlations for height data (Chart 4, p. 25), but he conceals it in

his discussion by an unwarranted averaging of positive and negative pre-test-gain correlations. One of the correlations concealed by his near-zero average is close to $-.75$! This is a good time to dispose of proposition No. 2 by saying that it contains two empirically-testable relations, and in the reviewer's judgment the book fails to muster convincing evidence for either.

Since proposition No. 3 has the odor of an inflated tautology (by *fiat* the author attributes all changes in traits to the influence of the environment, then says that when change is rapid the environment must be potent), the weight of the book rests on proposition No. 1. The correlation coefficients available in the longitudinal studies found in the literature do not fit the Overlap Hypothesis predictions very well, but by extensive adjustment of them for attenuation due to unreliability and variations in sample variances the author usually moves them in the desired direction. It does not seem to bother him that for the most part his reliability estimates are not based on the same sample as the test-retest coefficients nor on other samples of the same population. In fact, he is too little concerned about the gross inadequacies of sampling in most of the longitudinal studies themselves. One does wonder why test-gain coefficients aren't subjected to the same corrections used for the test-retest coefficients.

This reviewer is not convinced by the evidence mustered for any of the theoretical propositions Professor Bloom advances. He hopes that *Stability and Change* will inspire a thorough expository text on the correlation theory it so cavalierly applies. Such a mathematical introduction could be added to a second edition, and would force the author to clarify and resolve issues he now leaves muddled. The reviewer is certain the book will inspire immense effort

among educational researchers, through its focus on the potentialities of environmental variables, in the building of scales for situational variables and the discovery of their predictive validities against developmental trait criteria. Although he should concede more to maturation, or "unfolding" effects, he is most challenging when he asserts that "much of what has been termed individual variation may be explained in terms of environmental variation." (p. 9) Fortunately, Project Talent may right now be setting a new style in educational research, a style which promises to reduce the paucity of sound longitudinal data Professor Bloom has encountered in his attempt to test his ingenious ideas.

Finally, as an educator, Professor Bloom is concerned to discover "the limits within which a characteristic may be altered by educational or other environmental forces." (p. 14) He attempts the establishment of theoretical limits for the altering of a trait over a given time interval starting at a given point in the development curve, as a source of standards for judging the efficacy of innovations in curriculum. Here could be a healthy antidote to whooping it up over every "significant" rejection of the null hypothesis without regard to the practical importance of obtained differences.

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doings. In *The Principles of Semantics* and *Semantics* he attempted to sift and blend the wildly diverse theories and problems in this somewhat lumpy field. In his *Précis de sémantique française* he superimposed the resulting compromises and categories, like a grid, upon the French language. Meanwhile, he has also written two books on style: *Style in the French Novel* and *The Image in the Modern French Novel*. These are all serviceable works, generous to fellow scholars, and rich in bibliography. Now they are followed by a group of papers equally divided between Ullmann's two fields of interest, under the title *Language and Style*. Almost all have appeared before, but many are hard to get at, and Ullmann has revised them all for the present collection. This book, like his previous ones, takes a benign view of competing theories and methods, and serves as a kind of loose-leaf running history of semantic and stylistic developments.

The first essay, "Semantics at the Cross-Roads," pleads for a "structurally oriented semantics" to augment the more conventional studies of individual words, their etymologies, and changes in their meanings. Ullmann cites as hopeful beginnings G. K. Zipf's statistical studies of the relationship between the frequency of a word and the number of its meanings (but Zipf's work, it should be noted, has been largely undermined by George Miller and others); work like Ullmann's own on the unique semantic tendencies of each language (e.g., to fill semantic gaps by amalgamating two or more already available words, as happens often in German); and the copious investigations initiated by Jost Trier into the different ways that areas of meaning are divided up and covered by the lexicon in different languages. An essay on the concept of meaning splits the going theories into two types, those

LANGUAGE AND STYLE.
by Stephen Ullmann.
New York: Barnes & Noble
(Language and Style Series), 1964,
viii, 270 pp. \$8.95.

Stephen Ullmann has been for some time the grand surveyor of semantic

that take meaning to be a relationship between the linguistic form and something else ("analytic" definitions), and those that define meaning operationally, as Wittgenstein did. Not surprisingly, Ullmann finds the two types of theory compatible. These rather general papers are followed by two on historical methods in semantics, and one that catalogues some "semantic universals," features of meaning and processes of change (polysemy, synonymy, conversion of concrete words into abstract, etc.) common in one degree or another to all languages.

The four essays on style are similarly balanced. One surveys current activity in the field, both in studying the stylistic devices of a language (puzzlingly divided into "expressive" and "evocative"), and in studying how a single author draws on those resources. A second views a style as a series of *choices* among alternative forms of expression, and examines the cognitive and esthetic implications of, for instance, Camus' choice of the past indefinite in *L'Étranger*. Then there are two more specific essays, one on the difficult problem of extricating past styles from the encrustations of time which cloud their import, and one on imagery. The book concludes miscellaneously with a disappointing essay on the connection between language and thought and an interesting one on French borrowings from Latin during the Renaissance.

The bleakness of this summary does not, I think, radically misrepresent the quality of *Language and Style* itself. The book is drab. Not for lack of intriguing detail (on the contrary, there is an abundance here of linguistic oddments, such as the history of "*sacré*," which used to mean "holy" either before or after a noun, but now means "holy" when placed after and "cursed" when placed before). And not only because the book contains little that is

new, and indeed little that Ullmann himself has not said before. A reprise can be rewarding if it integrates or resolves. But this one tends to echo the confusions of the field and dissipate what forward motion it has in hundreds of unordered distinctions. In doing so, it obscures the major issues.

Philosophical semantics has traditionally concerned itself with two large problems: the conditions under which sentences (or propositions) are true or false, and the nature of the meaning (or reference, or sense) of a single word. The former, Ullmann dismisses as outside his sphere of inquiry. The latter, though, he calls "the central problem of all semantic studies," and to it he devotes a chapter. One can only be chagrined, then, to find that he settles for a truncated version of Ogden and Richards' forty-year-old definition, calling the meaning a "reciprocal and reversible relationship" between the "name" (the set of sounds making up a word) and the "sense" (the "information" conveyed by the name). Since the information conveyed by a name is what we generally think of as its meaning, this definition reduces to saying that the meaning of a word is the relationship between that word and its meaning—not a luminous dictum. It is difficult to see what Ullmann gets at by insisting upon the relational quality of meaning, other than the obvious fact that meanings do not mysteriously *inhere* in linguistic signs. The definition has no philosophical payoff, since it skirts all the problems, such as the relationship of images and concepts to meaning, the question of reference, the *kind* of link that exists between name and sense, etc. In *The Principles of Semantics* Ullmann actually cited these evasions as advantages of the definition: "it fits in with the most diverse lines of approach and adopts a non-committal attitude *vis-à-vis* the various controversial issues

besetting this subject" (p. 72). But that is to claim emptiness as a virtue. In any case, Ullmann's practice of what he is best at—historical semantics—remains unaffected, happily, by his definition.

The very ease with which he, like everyone else, produces specific meanings on need should prompt a measure of skepticism about the traditional framework of the meaning puzzle. We all deal fluently with roughly equivalent expressions, definitions of words, examples, and so on. It is when we leave these familiar grounds and ask just what sort of thing a meaning *is* that the clouds descend. This was one insight that prompted the efforts of Wittgenstein (whose arguments Ullmann seems to misunderstand) to substitute the notion of use for that of meaning. I think also of J. L. Austin's "The Meaning of a Word" (in his *Philosophical Papers*), which showed that the sensible question "what is the meaning of the word *x*?" leaves sense behind when generalized into "what is the meaning of a word?" just as it is illegitimate to pass from "what is the price of a Rolls Royce Silver Cloud, F.O.B. New York?" to "what is the price of a thing?" The trouble comes in expecting a meaning to be a particular type of entity. There are genuine problems about lexical meaning, to be sure: for instance, how the linguist or philosopher should proceed in establishing the precise meaning of a word, what information a speaker has about the words he uses, and what information a dictionary entry must comprise. But these are empirical and methodological questions that need not wait for their solution upon an *a priori* definition.

The central empirical problem in semantics might be formulated in this way: what does a speaker have to know, in addition to phonology, syntax, and an assortment of facts about the word, in order to understand or produce new

sentences? At a minimum, of course, he needs to know the meanings of the words (or morphemes, rather). But since most morphemes have more than one sense, he must also have some means of eliminating potential ambiguities. He must know the grammatical role of each morpheme, too, as well as what might be called rules of application: "elegant" = revealing, subtle, and efficient (*said of a mathematical proof*). And crucially, though less obviously, he must know how syntactic relations in a sentence operate on and combine the meanings of words; otherwise, however refined his understanding of words stretches of discourse will be gibberish to him.¹

In brief, an adequate semantic description of a language will have to be linked tightly to a syntactic description, and semantic *theory* cannot with impunity limit itself to words. Yet that is precisely what Ullmann's book does (explicitly, on p. 64; he even rules out articles, prepositions, conjunctions, etc., as not belonging to the lexical system of a language). For that reason the valuable data it presents and the methods of study it proposes scatter into a nearly random pattern, full of tangles and loose ends. To be sure, Ullmann is not alone in this, but the disorder is particularly graphic in a book that aspires to theory and system. He is barred from the very "structural semantics" he looks toward by the narrow boundaries he sets to the inquiry.

Much the same criticism applies to the essays on style. Ullmann does take what I consider a promising approach to the

¹ The matter is too complex to admit of more than this sketchy treatment here; but a good deal of work along these lines is beginning to appear—see especially two recent articles of Jerrold Katz and Jerry Fodor, "What's Wrong with the Philosophy of Language?" *Inquiry*, Vol. 5, 1962, pp. 197-237, and "The Structure of Semantic Theory," *Language*, Vol. 39, No. 2, 1963, pp. 170-210.

subject in suggesting as a key concept "the idea of *choice*: the possibility of *choosing* between two or more alternatives—'stylistic variants,' as they have been called—which mean the same thing but do not put it in the same way" (p. 102). His example, an analysis of subject inversion in Proust, gives the proposal some authority, isolated though the demonstration is. But it is apparent in general that Ullmann has nothing other than intuition that tells him when two "alternatives" differ only stylistically (the difference between "He came too soon" and "He arrived prematurely," which sentences he quotes from Hockett, is of quite a different order from the change wrought by subject inversion). Intuition can yield insight, in stylistics as in semantics, but a concept such as that of stylistic variants only acquires precision and explanatory power when it is pegged to a grammatical and a semantic theory. A theory of style might, for instance, tie the idea of variants to that of grammatical transformations, as developed by Noam Chomsky.²

Whatever form an adequate theory will take—and admittedly, none exists now—the absence of a theory leaves Ullmann's stylistic essays in a state of conceptual disarray. They are full of particular truths and half-truths, but without coherence or hierarchy.

Language and Style makes no forays into learning theory, aside from a few remarks on the role of language in the development of thought processes. But clearly, until semantics progresses well beyond the point at which it has arrived in this book, and particularly, until it subordinates its preoccupation with single words, its inadequacies will sharply restrict the scope of studies in the

learning of language. For there is no telling how something is learned before knowing what it is that is learned (a point made or implied several times in the Spring, 1964 issue of this journal, notably in helpful articles by Paul M. Postal and by Roger Brown and Ursula Bellugi). And while stylistics remains effectively theory-less, it is futile even to ask the potentially interesting question: how and why does a speaker (or writer) come by the unique pattern of habits and abilities that constitute his style?

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REALMS OF MEANING:
A PHILOSOPHY OF THE CURRICULUM
FOR GENERAL EDUCATION.
by Philip H. Phenix.
New York: McGraw-Hill, 1964.
391 pp. \$7.50.

This book attempts to build a philosophy of general education on the foundation of a pluralistic theory of meaning and of symbolic functioning which is intended to bring together many of the distinctive insights of twentieth century philosophy and philosophical anthropology. In a manner that is strongly reminiscent of the late Ernst Cassirer's philosophy of symbolic forms, Professor Phenix argues that human beings are essentially "beings that discover, create, and express meanings" and that "human meanings extend across a broad spectrum, encompassing all the unique qualities of mind described by the scientists and scholars who study human nature" (p. 21). The central thesis of his book is that the job of general (as distinct from special or vocational) education is to introduce the student to the principal varieties of meaning as these

²For a tentative proposal along these lines see my "Generative Grammar and the Concept of Literary Style," *Word*, December, 1964.

are exhibited in six principal domains of human intellectual activity. Through coming to understand the modes of meaning that are peculiar to history, science, and the arts, to mention just a few, we in some sense recapitulate the universal human achievement and are thus educated in our "essential humanness."

The book is divided into three main sections. The first of these develops the theory of meaning and of human nature to which I have just alluded. The second, which makes up the bulk of the book, is devoted to an account of the six "realms of meaning" that are to be represented in a curriculum of general education. The last section is a discussion of problems connected with the design of a curriculum that is to be guided by the conception of general education outlined in the first two sections of the book. I will discuss these sections in order, making such critical observations as seem appropriate.

Although "meaning" is presented as the central concept that unifies the whole range of symbolic activities with which Professor Phenix is concerned, no real analysis of the concept of meaning itself is carried out in Part I or anywhere in the book. We are told that meaning involves "experience" which is then defined as a capacity for self-awareness or self-objectification. We are further told that meanings are differentiated by the logical rule or structure governing them and also that, while there is no limit to the possible proliferation of types of meaning, certain types have been extensively elaborated by human beings and are therefore of special importance for purposes of general education in the arts and sciences. Finally, we are told that "meaning" must be capable of being expressed or communicated. What these characterizations fail to make clear is the nature of the generic meaning-func-

tion itself which is supposed to be common to the movements of a ballet dancer and a mathematician's demonstration. In the absence of any further analysis of the notion of meaning itself the impression is inevitably left that meanings are *sui generis* mental activities whose relationship to the concrete facts of symbolic behavior remains problematic. This is the more unfortunate since Phenix could have made all the points he wants to make about the curriculum in general education without committing himself so heavily to a concept—that of meaning—which is philosophically controversial and problematic in ways that make it more of an obstacle than an aid in the formulation of a set of educational goals.

These confusions are not alleviated by a persistent tendency on the part of the author to treat "meaning" and meaningfulness" as interchangeable terms. Thus, he declares that the contemporary "search for meaning" reflects a crisis in man's relation to himself, a crisis brought on by a number of quite diverse developments (among them, the decline of religious faith and the substitution of statistical for causal explanations in the sciences) which pose "threats to meaning." What is not explained is how such developments, even if they do have something in common, can be regarded as threats to meaning understood as the conceptualizing function. This is particularly obscure since most of those cited, however unsettling they may be to our prepossessions, serve precisely to bring out the active and, as Phenix would put it, "creative" participation of the human mind in the construction of various realms of meaning. In any case, to suggest, as Phenix does, that both G. E. Moore and Paul Tillich, Rudolph Bultmann and Clive Bell, C. G. Jung and Karl Barth, are all pursuing "meaning" is either to say something that is wholly truistic and

unhelpful or to encourage serious blurring of the very important differences that set apart the investigations carried out by these and other figures.

Although Phenix does not attempt a definition of meaning, he does offer a classification of meanings. First, all meanings have two logical aspects, quantity and quality. Under quantity they may be "singular, general or comprehensive." The qualities of meaning are "fact, form and norm," i.e., "meanings may refer to what actually exists, to imaginary possibilities, or to what ought to be" (p. 26). Thus, there are nine "generic classes of meaning" such as "general form," "singular fact," "comprehensive norm," etc., which are then identified as the distinct realms of meaning which the author discusses in Part II. Since there are nine "generic classes" and only six "realms" of meaning, this identification can be effected only by bringing comprehensive fact, comprehensive form, and comprehensive norm under "synoptics" and both singular and general norms under "ethics." Each of the six realms are then shown to comprise a number of disciplines and to each of these a chapter is devoted in the second section of the book.

Three comments on these treatments of the several disciplines seem to be in order. First, it is not really clear to whom these characterizations of mathematical knowledge, historical knowledge, etc. are addressed. Phenix states correctly that they would be of no use to a person who had no previous knowledge of the disciplines in question. But, as he again admits, the accounts he gives of the "logic" of these disciplines are derived from other sources which are, judging from the bibliography, themselves at one or more removes from the primary investigations in the several relevant fields; and it is doubtful that a person familiar with any of the disci-

plines whose logic is to be explicated would gain much from the extremely over-simplified characterizations Phenix presents. On the other hand if these chapters were a student's first introduction to the analysis of, say, historical knowledge, the result would, I think, be unfortunate.

Second, Phenix's treatment of the several realms is highly tendentious if only because it is apparently not based on the full range of the best philosophical treatments of the several fields of inquiry with which he deals. One view of religion, for instance, is presented (Tillich's) and the reader is left with the impression that the "logical structure" of this type of meaning has been satisfactorily delineated. Again, we get "history" à la Collingwood and "personal knowledge" (a rather mysterious form of meaning) à la Buber without any suggestion that there are other conflicting views and, indeed, without any clear presentation of the questions to which these theories are intended as answers.

Finally, the system of classification itself is radically unsatisfactory. Quite apart from the danger that the student would spend as much time on mastering the system and its peculiar terminology as he would on assimilating and evaluating the positive theses Phenix defends, there are fundamental incongruities in the way that disciplines are associated with one another. Why, for example, should history be placed under "synoptics" with religion and philosophy instead of under "empirics" and why should the province of "singular fact" under the latter have been preempted by "personal knowledge"? If philosophy, as Phenix says, is concerned with "the interpretation of meaning," why is it not more closely connected with "symbolics" and what is the difference, anyway, between "general form" and "comprehensive form"? In what sense

is esthetic form "singular" and why are "comprehensive norms" assigned to religion while ethics deals only with singular and general norms? Why are the facts of history "comprehensive" and those of physics only "general"? These are some of the questions to which the table of meanings on page 28 gives rise. The discussions of Part II in my opinion neither answer these questions nor do they indicate that there would be any compensating gain for adopting a system of classification that comports as many paradoxes as this one does.

In the final section dealing with the general education curriculum, Phenix makes a number of points which are as undeniably true as they are barren of specific implications for curriculum design. We are told that in attempting to maximize the student's awareness of meanings, we must keep in mind both the "intrinsic logical order of the various kinds of meaning" (p. 9) and the different stages of development at which human beings become capable of assimilating certain types of knowledge. In making a selection of materials for use in a general education curriculum we may be guided by several different methods, but the best one is to solve "the problem of quantity by means of a principle of quality in curriculum materials." (p. 309) The latter principle in turn requires that we draw our materials from organized scholarly disciplines, that we attempt by various means to make the student familiar with the "representative ideas" and distinctive methods of inquiry of the several disciplines and that we "appeal to the imagination of the student." With all of this it is impossible to disagree although at times one would like to enter a demurrer as for example when Phenix claims that "a person cannot attain the highest mastery in the arts unless he knows how to communicate,

understand facts and generalizations, relates insightfully with others and with himself, has a sensitive conscience, and has achieved a certain perspective on the whole." (p. 271) But the more serious objection is that this steady exfoliation of truisms does not make clear how a single actual problem of curriculum design is illuminated by the "realms of meaning" theory. Because no examples are given and no actual problems of curriculum planning are discussed, the whole discussion remains at the level of platitude.

Now it may be that some of Phenix's theses will strike his readers as much more significant and radical than I have suggested. He does, after all, strongly defend the integrity of the disciplines and of their distinctive conceptual procedures and he insists that education is an initiation into a collective enterprise in which mastery of one's intellectual heritage is a precondition of effective innovation. This needs saying again and again and Phenix says it often and well. But the philosophy by reference to which this view is justified by Phenix is so carelessly formulated and so ridden with unhelpful jargon that in its present form it is unlikely to afford much support to its praiseworthy educational goals.

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THE USES OF THE UNIVERSITY.

by Clark Kerr.

Cambridge: Harvard University Press,
1963. 140 pp. \$2.95.

"The university has become a prime instrument of national purpose" (p. 87) because the growth and transmission of knowledge are the key to national growth. The desired kinds of knowledge

and their potential applications today are countless, so the uses to which the university is pressed are legion. Mr. Kerr, President of the University of California, depicts in this book, based upon the Godkin Lectures of 1963, the results: confusion of counsel, sprawling growth of activities, facilities, and personnel, mutual interference of functions, but withal an astonishing productivity of worthwhile outcomes. Two themes dominate these lectures: What are, and what should be, the uses we make of the universities?

Drawing upon both the history of universities past and an inside view of those present, Mr. Kerr illuminates his topic with rare appreciation of its complexities. Although he ventures some recommendations and a few predictions (apparently affected by the expectation that good judgment will make them so), the predominant tone of his book is analysis.

The university, says Mr. Kerr, is a multiversity, a producer and transmitter of knowledge far more diverse in kind than was historically intended or permitted. Unlike Newman's university teaching gentlemen "liberal knowledge" or Flexner's company of specialists, making fundamental discoveries responsive to the needs of the time, the contemporary university has also its secondary schools, vocational schools, businesses, "uplift" agencies, service stations for the general public, and so on.

It is less a community than a federation, less an organism with persisting and clear unity of spirit and purpose than a cross-roads of societal traffic. It is not ruled by the masters and students, but by a shifting power-complex of professors, students, alumni, state legislatures, federal agencies, local pressure groups, and administrators. It is "inherently a conservative institution but with radical functions." (p. 32)

The university today is no cloister, but a federal grant institution caught in the second phase of the second stage of profound shifts from the work of a pre-industrial and pre-scientific world to one in which the growth of knowledge is the prime determinant of the future. The first of these stages was the impact of the land grant university movement, responding to industrial and agricultural development and to an egalitarian and populist shift toward a classless American society. The second stage is that of the federal grant university, arising out of national support of scientific research during World War II. In its first phase this latter development proceeded upon an "intuitive balance" among competing claims of individual faculty members and institutional purposes, of research and teaching, of one region (say New England) and another (say the South), of the sciences and the humanities, of graduate training and undergraduate education, of merit for the research task on one hand and the politics of equality of opportunity on the other, of specialists' judgment and general formulae for distributing largesse, and of local, state, and federal influence upon the shape and work of the universities. We now move into a second phase of this development in which a bureaucratic effort is under way to design and administer a more rational accommodation of these competing demands.

Where then is the university and whither should it tend? "What is the justification of the modern American multiversity?" asks Mr. Kerr.

History is one answer. Consistency with the surrounding society is another. Beyond that, it has few peers in the preservation and dissemination and examination of the eternal truths; no living peers in the search for new knowledge; and no peers in

all history among institutions of higher learning in serving so many of the segments of an advancing civilization. (pp. 44-45)

And, with tongue in cheek, Mr. Kerr suggests:

A university anywhere can aim no higher than to be as British as possible for the sake of the undergraduates, as German as possible for the sake of the graduates and the research personnel, as American as possible for the sake of the public at large—and as confused as possible for the sake of the preservation of the whole uneasy balance. (p. 18)

Mr. Kerr's arguments leave room for doubt on some major theses: Has he emphasized sufficiently the priority of the rejuvenation of undergraduate teaching where "the professor's love of specialization has become the student's hate of fragmentation" (pp. 14-15) and where the cruel paradox arises that "a superior faculty results in an inferior concern for undergraduate teaching" (p. 65)? Is he correct in accepting the principal features of today's federal grant university but warning the superior liberal arts colleges (now beginning to get research grants for professors and undergraduates) that this pattern will surely subvert the priority of teaching? Do Mr. Kerr's specific recommendations reflect an undue weight upon the interests and perspectives of the "haves" as against "have-not" regions, universities, and types of knowledge-making and knowledge-transmitting institutions? Is he unduly pessimistic about our capacity to use intelligence to control unwanted consequences of its own product? (As with the consequences of use of a new insecticide, he suggests, we learn too late.) Has he let mediation outrank creative innovation in the de-

gree of his resignation to drift as against clarification of purpose and inventiveness of leadership in the management of the universities?

The "knowledge industry," Mr. Kerr reminds us, now creates 29 per cent of the gross national product in the United States and is growing at twice the rate of the rest of the economy. It is the key to industrial development, which in turn profoundly shapes the community and its life. His book is a timely, astute, provocative, and therefore notably useful instrument for reflection upon the uses of our universities. After reflection comes reform.

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EDUCATION AS INITIATION.

by Richard S. Peters.

*London: Evans Brothers Limited, for
The University of London
Institute of Education,
1964. 48 pp. 2/6.*

"This lecture is just one more attempt to get a bit clearer about what I have been trying to do most of my professional life." Thus Mr. Peters inaugurates his tenure as Professor of Philosophy of Education at London University's Institute of Education. It is a distinguished chair, and, judging from the earlier contributions Peters has made to psychology and political theory as well as to the philosophical analysis of educational concepts, its distinction should increase before he leaves it.

Despite the modesty in tone, the task set for this inaugural lecture is no modest one; it is, indeed, to define "the concept of 'education'"! Peters recognizes that it is futile "to suppose that

certain characteristics [of education] could be regarded as essential irrespective of context and of the questions under discussion" (p. 11). Still, he and Aristotle agree: "Everything is what it is and not some other thing" (p. 11), and education must be conceptually distinct from such activities as "social work, psychiatry, and real estate" (p. 11). We could grasp the concept more easily if it weren't for our tendency to treat particular consequences or aspects of education as if they were definitions. For example, as the social sciences make us aware of the consequences of schooling, we are tempted to treat those effects we prefer as *defining* characteristics of education; we may use the statement, "Education is a good investment," to mean that any training of youth showing a net social profit is *ipso facto* education. Peters correctly warns us off that sort of confusion.

More difficult to avoid is the error of treating procedural aspects of education, particularly those enshrined in appealing metaphors, as if they were definitions. Peters discusses the moulding-metaphor, the growth-metaphor, and the distinction between 'education' and 'training,' in each instance adding greater plausibility to his main thesis: that the term 'education' does not refer "to any special sort of process . . . ; rather it encapsulates three basic criteria which such processes must satisfy." (p. 31) We may re-state it this way: If a person tells you that he is engaged in education, you haven't received a *description* of his activities, but rather a *claim* which you can refute by showing that (a) he is not producing a state of mind which is intrinsically valuable, *or* (b) he is not eliciting a sense of caring for the valuable and participating in its achievement on the part of the person being educated, *or* (c) he is not directly engaged with the cognitive ideas and beliefs of his students.

I admire Peters' ability to argue profound questions with common sense and clarity. He is most convincing in his negative argument, that it is a dangerous mistake to translate criteria (a,b,c above) into procedural terms which then become educational dogmas. I am not convinced that his three criteria define "*the* concept of 'education.'"

The term has many senses in English (Germans require three different words for it); in one standard sense of the word, for example, it is true to say that all societies provide for the education of their young, but in Peters' usage that statement is false. As he recognizes (p. 25 et seq.) Peters is offering a "persuasive definition." I am persuaded that his conservative ideals would promote a good education, but not that they define the term.

In concluding his lecture, Peters offers 'initiation' as the descriptive concept which best reveals the true nature of education. The analytic mode of speech disappears, and the author frankly preaches "for the generalized Puritan virtues of enterprise, orderliness, thoroughness, and perseverance—especially in education." (p. 47)

Two comments resist suppression: (i) Since Peters visited schools in Newton and Brookline only a few years ago, American education has pretty well forgot about "permissive methods" and withdrawn its "insistence . . . that children should be happy." (p. 43-45) He would do well to read Friedenberg instead of Kerlinger. (ii) One of the major tasks of the Institute of Education is to help the Asian and African nations of the Commonwealth to transform their meager capital of English into a pipeline giving access to the arts and sciences of Western civilization. The term 'initiation' with its overtones of Van Gennep, tribal ceremonies, and the like might help to link up the aspirations and traditions of the emerging nations with

the highest standard of Western education, "with all that it entails in blood, sweat, and tears" (p. 46), particularly for non-Westerners. If Peters holds that wholly laudable purpose, however, he would do well to delete from future lectures the repeated phrase 'barbarians outside the gates.'

Only when it sticks to philosophical analysis does Peters' lecture augur well.

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THE SHAPING OF THE
AMERICAN HIGH SCHOOL.

by Edward A. Krug.

New York: Harper & Row.

466 pp. \$8.00.

As its title suggests, Mr. Krug's book attempts to trace the development of the modern American high school and to define the various influences—professional, social, and intellectual—which account for its being the kind of institution it is.

The chronological focus of the study is the period between 1880 and 1920, when, Mr. Krug believes, "the American high school assumed its familiar shape and characteristics." (p. xiii) These forty years, Professor Krug feels, can be usefully subdivided into two discrete periods. The years between 1880 and 1905 mark a period of moderate revision. It was in the 1880's that the public high school became the most numerically prevalent institution of secondary education. Though its destiny was by no means clear at that time, the kinds of problems in which the high school was to be enmeshed for the next five decades were already evident—who would be educated, what should they be taught, and what should be the relationship of the high school to the

other American institutions of formal education, particularly to the college.

In this earlier period, the National Education Association was the arena where these questions were discussed and where attempts were made to resolve them. In its forums and in the professional journals, educational leaders of the 19th century—James H. Baker, Charles W. Eliot, William Torrey Harris, Augustus Nightingale, and G. Stanley Hall—argued about the proper role of the growing high school and the related problem of defining an adequate curriculum. Though these two and a half decades produced volumes of provocative discussion, the resultant changes in the character of the high school, Professor Krug believes, were modest.

This was an age of revision, but the shift in ideas was moderate rather than extreme. For the most part, the leaders of revision fostered the modern subjects without disparaging the classics; both groups of subjects were considered appropriate for pupils of all social classes and vocational destinations. Programs of pupils were to be individualized and preferably governed by some version of the elective principle. There was, according to these tenets, no valid distinction between preparing for college and preparing for life. (p. 190)

The period between 1905 and 1920 was of a different character. Its dominant theme, Professor Krug feels, was education for social efficiency, a slogan which combined two related doctrines—education for social control which emphasized the school's responsibility to inculcate desirable beliefs and habits, and education for social service which stressed the need of the school to relate to the community in which it existed. The triumph of education for social

efficiency was partly a result of the pervasive spirit of reform in America during the Progressive Era, but it was also partly a response to the rapid expansion of the high schools. Faced with rapidly increasing enrollments and dedicated to the ideal of universal secondary education, school men seemed ever more aware of the "new masses" attending the high school, and increasingly worried about failures and drop-outs. The rapidity of physical growth, moreover, prompted superintendents and principals to seek more efficient techniques for managing their burgeoning enterprises. For this purpose, the practices of "scientific management" seemed ideally suited—especially since scholars in schools of education had for a decade before 1900 been in search of scientific principles upon which to base a discipline of pedagogy.

Under these circumstances, the old questions—education for whom and in what, the relationship of the high school to the elementary school and the college—seemed to school men like new problems. One response was the founding and spread of the junior high school, frequently extolled as advantageous for differentiating those students who were planning vocational careers from those who were preparing for advanced academic studies. Another response was the attempt to reshape the high school curriculum, particularly those fields identified in the minds of school men as academic—English, foreign languages, mathematics, science, and history. The institutional mechanism for implementing this response was the N.E.A.'s Commission on the Reorganization of Secondary Education, whose reports emerge in Mr. Krug's study as a kind of synthesis of the professional responses of the pre- and post-1905 eras. For though the Commission on Reorganization felt that social changes, the rapidly expanding high school

population, and developments in educational theory required emphasis on social as well as individual objectives of education (the famed *Seven Cardinal Principles*), the reports did not demand the abolition of the traditional academic subjects. Thus while vocational guidance and extra-curricular activities were seen as necessary parts of an adequate school program, the time-honored instructional fields remained, albeit at the price of professing social efficiency as one of their aims, and, especially in English and the social studies, modifying what was taught in line with this objective.

World War I, Professor Krug feels, did little to alter the direction in which the high school was headed. Indeed the curtailment of German courses, the war-time stress on practical subjects, and the Americanization campaign all were evidence of continued emphasis on education for social control, an emphasis which continued into the 1920's. Yet by the late twenties, the effects of social efficiency were still limited. What predominated was the kind of synthesis of the old and the new represented in the reports of the Commission on the Reorganization of Secondary Education. The high school remained then, as it has since, committed to both individual and social aims, its curriculum comprised of both academic and practical studies.

The main outline of Professor Krug's synthesis will not surprise those who are familiar with the literature on American education in the early 20th century. Nevertheless, the book is not without significance. For one thing, it is the most thorough treatment of the subject that has yet appeared. Clearly, Mr. Krug has made a painstaking search of the relevant professional sources, and his study adds considerable detail to what has previously been written about the history of the high school. More-

over, the thoroughness of his research has enabled him to correct a number of misconceptions which have been added to the conventional historical wisdom by less careful scholars. The analysis of the character and causes of expanded high school enrollments, the examination of the supposed decline in the popularity of academic subjects after 1910, and the evaluation of the oft-heard claim that school administrators surrendered to the big business ethos in the first decade of the century are cases in point.

But the familiarity of the main elements in Mr. Krug's synthesis does raise the question of the adequacy of his frame of reference. Its basic assumptions seem both clear and traditional. The reference point is the present-day comprehensive high school with whose characteristics Mr. Krug is familiar. The research task is to look back across the preceding three quarters of a century to see how the institution came to be the way it is. Two interactive categories of influence seem determinant: the social influence whose impact upon the schools was manifested in increasing enrollments, and the professional influence—the theories and proposals of educational leaders expressed chiefly through the activities of professional associations. Of the two categories of influence, the professional seems the more important. The focal points of Mr. Krug's two periods are two N.E.A. Committees: the Committee of Ten, and the Commission on the Reorganization of Secondary Education. The most influential individuals are Charles W. Eliot and Clarence Kingsley. The most heavily mined sources are N.E.A. reports, pedagogical journals, Office of Education publications, and the unpublished manuscripts of conference participants.

Any frame of reference has its limitations, of course, but it is a fair question whether the one Mr. Krug has chosen

may obscure some potentially revealing developments. His study omits, for example, consideration of the intellectual components of the "official culture" which the studies of Morton White (*Social Thought in America*) and Henry May (*The End of American Innocence*) have defined. Were this development considered, it might help to distinguish more clearly than Mr. Krug has how and why the views of Charles W. Eliot and William Torrey Harris on the purpose and content of secondary education differed from those of Albion Small and John Dewey. It might also clarify what school men and social critics in the first decade of the century meant when they claimed that high school courses even in the modern subjects were too formal and too literary to meet the demands of social and economic conditions.

To cite another example, the primacy which Mr. Krug assigns to professional influences and his consequent heavy reliance on official reports obscures the process by which curricular change took place in the high schools. The process as Mr. Krug defines it is correct, as far as it goes. School administrators, dissatisfied with the effects of college admission requirements on high school curricula, supported the efforts of the N.E.A. to shape a more liberal secondary school course of study which would also be acceptable to the colleges. The result was the various reports of the Commission on the Reorganization of Secondary Education which, while not abandoning the earlier academic and individual emphases, tended to incorporate the criterion of social efficiency as a basis for curriculum reform. But the actual process was more complex than this. In the social studies, for example, courses of the type recommended by the reorganization commission had begun to appear in urban secondary schools as early as 1905 and were being taught

in at least a dozen large school systems by the time the commission met. The courses had been written and taught by teachers who had been students of anti-formalist scholars like Albion Small and James Harvey Robinson and at least one of whom was heavily involved in municipal reform activities. It was these teachers who were the influential members of the committee. Thus the reorganization report was based upon courses already in practice and the commission functioned not as an innovator but as a kind of dissemination agent, granting to antiformalist courses in social studies the kind of official sanction and publicity requisite for their acceptance by a large number of schools.

In the final analysis, however, the limitations imposed by Mr. Krug's frame of reference are not disabling. Though his book is limited by his acceptance of the more conventional explanations of educational change, it has the considerable merit of being the most complete and careful history of the American high school yet written.

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AFRICAN UNIVERSITIES

AND WESTERN TRADITION.

by Sir Eric Ashby.

Cambridge, Mass.: Harvard University Press, 1964, 113 pp. \$2.95.

This book, essentially the Godkin Lectures for 1964, is a clear and concise analysis of the development of universities in West Africa. Ashby first outlines the history of a university tradition within a colonial framework in the countries of Ghana and Nigeria. He suggests that, until independence was achieved in these countries, the university was an elite-producing system

with its constitutional roots in Oxford, Cambridge or London.

Under the colonial system the universities were sheltered from the hurly-burly of African nationalism since the administration, largely a product of the same university tradition, respected the autonomy of the universities and the convention that recognised it. Independence brought criticisms of the universities because their curricula were narrow and their entry standards appeared to be too high for countries with limited educational resources for secondary education. These criticisms Ashby shows in part to be justified. The very isolation of the university from society brought about by its autonomy makes public relations difficult. In this field too, Ashby judges West African Universities to have failed, reducing their effectiveness to influence, or even to come to terms with, popular opinion.

If one adds to isolationism and poor public relations an almost total lack of African academic staff, the mixture becomes a volatile one in the minds of leaders who see universities as the assembly line for future executives and technologists. If the finished product seems in danger, because of the process itself, of being critical of national policies, or at least not wholly committed to them, state intervention in university affairs in Africa at present is a foregone conclusion.

State intervention has occurred in various degrees in Ghana and in Nigeria. Ashby makes an analysis of these two types of intervention, seeing them as essentially the breaking of a convention which left university affairs to university men, but pointing out that constitutionally the way was open for such intervention, and always has been—even in Britain. Tradition, however, has made the convention of non-interference almost a *sine qua non* in British universities. At present in Africa there

is little likelihood that the convention will achieve the same force, although Ashby reminds us that universities usually outlive political parties.

Ashby's main argument and the insistence throughout that a university is, in Africa, organic within the community, are backed by many references. It is a scholarly piece of work as well as an insightful and acutely perceptive analysis. That said, the work could be supplemented by reference to events in the short histories of the universities of east and central Africa. The withdrawal of students by first Malawi and then Zambia from the University College of Rhodesia and Nyasaland, in Salisbury, Southern Rhodesia, is an example of direct political intervention in university matters. The reasons for withdrawal were political and social, not academic. Again, Nkrumah was not the first to terminate a university appointment for political reasons. The government of the Federation of Rhodesia and Nyasaland effectively achieved this by withdrawing residence permits from two lecturers at the University College. The first case arose in 1959, only two years after the College took in its first student.

Finally, the failure of the commission on the formation of the University of Zambia, headed by Sir John Lockwood, to consult the staff of the University College in Salisbury appeared to be calculated political intention. The image of the University College in Salisbury was unacceptable to nationalist opinion for much the same reasons as in West Africa. The Lockwood Commission dared not visit it in case the impartiality of the report were endangered. Here, however, the line between political expediency and educational policy were very thin and one wonders whether events will prove Lockwood justified.

The pivot of independent university

development in Africa appears to be money. American universities have a strong alumni tradition. Both Britain and America can afford the vast sums of money that go into universities whether or not the money comes from the taxpayer or industry and commerce, or rich alumni. Universities in Africa will be dependent for many years on external aid. As requests for such assistance to international agencies are channelled through government, the policies of university and government must be in harmony. If they are not, then it appears that governments will impose their will. The recent subsidy to the University of East Africa from outside agencies came with certain conditions. The University may have had misgivings about these conditions, particularly, one might suppose, the Africanisation of over half the University posts in a five-year period when East African graduates are so few.

At present, the financial position of the University College in Southern Rhodesia is being reviewed. The staff of the University College are said¹ to be in "astonishing agreement" about maintaining a high entry level. The Principal is reported as defending the entry level as follows:

"On educational grounds I should personally deplore the abolition of sixth forms and the resultant loss of quality and intellectual and personal leadership in the secondary school system. I cannot believe, however, that this country, at this stage of limited economic resources and when in urgent need to expand African secondary education, could contemplate the extravagance of such a change.

"It would involve asking the college to do, at six times the cost, what can be better done in the schools.

¹ *Rhodesia Herald*, Wednesday, October 7, 1964.

"It would reduce by nearly one third the capacity of the college to supply the graduate manpower needs of this country, since each place now occupied by an undergraduate for three years would be occupied for four years by lower qualified entrants.

"There may also be the unspoken fear that to reduce the entry level would flood the College with white students, since the white education system produces a great number of qualified students every year. This would hinder increased African participation still further. The money for this College's future will come from Southern Rhodesia and Britain. Application to external agencies for funds will go through the Southern Rhodesia external affairs department. There seems little doubt in which direction the wind will blow if there is a confrontation."

This brings one again to the central issue in Ashby's book. If the long view is that universities will outlive political change and flourish despite it, there still remains the short-term reconciliation of political expediency and educational principle. The university's role is to keep the distinction between the two sharp by its very existence. If one takes India as an example of past failures because of insistence on misguided principles, one must also take Ghana as an example of present failure due to political pressures. Without the freedom to make decisions, even wrong ones, the university becomes an organ of the state.

Ashby himself sums up the issue succinctly as follows:

If a university in Africa is to serve its community in this way, it must have understanding and co-operation from the public: it must enjoy certain privileges and immunities. Just as a State-financed medical service interferes at its peril in the diagnosis

and treatment of disease, so a State-financed educational service interferes at its peril in the pursuit and communication of knowledge. Universities must be left alone to run their own affairs, even though the taxpayer finances them; not in deference to any ancient tradition (though universities do inherit an ancient tradition of immunity from interference by the State), but for the simple down-to-earth reason that universities which are not left to run their own affairs lose their vitality; their best scholars seek posts elsewhere; their scrutiny of the pattern of civilisation becomes timid and unadventurous, and therefore useless to the community they serve.

In Ashby's brilliantly-contrived book, the dangers and alternatives are presented. It will be a starting point for serious students for many years, as well as, it might be hoped, evidence of its author's intention to produce a much more comprehensive work in the future.

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ECONOMIC ASPECTS OF EDUCATION.

by William G. Bowen.

*Princeton: Industrial Relations Section,
Princeton University, 1964,
128 pp. \$3.00.*

This volume consists of three essays. The first is a critique of the techniques of measuring returns to education and the other two are studies of important problems in British university educa-

*Speech delivered by Sir Eric Ashby at the University College of Rhodesia and Nyasaland on Presentation Day, Saturday, 7th April, 1962.

tion. Each of the essays is notable for its clarity of style and each can be read with profit by anyone interested in educational policy. To gain a full appreciation of Bowen's skill in analysis, the reader must know some economics, but this is not required simply to follow the course of argument.

The first essay, "Assessing the Economic Contribution of Education: An Appraisal of Alternative Approaches," gives a balanced appraisal of four techniques of measuring economic returns. These are the simple correlation approach, the residual approach, the direct returns-to-education approach, and the forecasting-manpower needs approach. The one which intrigues Bowen is the direct returns-to-education scheme. This is no doubt so because it offers the greatest opportunity for the economist to use his tools of analysis in new and challenging ways. (This is true even though the returns-to-education approach is less severely mathematical than the residual one.) Bowen writes that ". . . the results obtained for the U.S. economy . . . offer rather consistent (some might say surprisingly consistent) support for the notion that education, on the average, has paid significant financial as well as non-financial rewards" (p. 32). Lest the educator jump to the conclusion that economists are demonstrating the obvious, it should be said that the main questions of analysis center on whether these earnings differentials reflect productivity differentials and whether the productivity differentials that are attributable to education are greater or smaller than could be obtained by investment, say, in physical capital. These latter questions are not easy to deal with and Bowen's essay, in my opinion, is an accurate statement of what has been accomplished to date in trying to find answers that will stand up under rigorous examination.

However, much remains to be done. One point that has not been treated in detail, for example, is the influence that policy decisions in the educational establishments have on the creation and perpetuation of income differentials. Let us consider this case. In the last twenty years the American people have demonstrated a desire to spend ever larger amounts of money on health and education services. Institutions of higher education have responded to these increases in demand but in a somewhat different way. In the case of medicine, the emphasis has been placed more strongly on university-centered research and less strongly on the training of any greatly increased number of physicians. In education the emphasis has been placed on raising the number of people who hold teaching certificates and not very noticeably on research. The result has been a widening of income differentials between doctors and teachers. If the matter stopped here, no one need be concerned, but a sharp change in income differentials has effects on the calibre of person who is attracted to the various professions. Thus inter-profession earnings differentials eventually come to reflect differences in ability, as distinct from education much more strongly than before the increase in demand occurred. Now, the choice between the research or training response to an increase in demand is influenced by professional and political forces, but institutions of higher education have themselves some power over the decision. It would be interesting to try to measure the effects of the exercise of this power.

The second essay, "University Finance in Britain and the United States," is perhaps the most stimulating of the three, because it delves deeply into the issue of university autonomy, not in the superficial sense of maintaining "academic freedom," but in the sense of the

university's right to decide questions about its size, the distribution of students among different programs, and the allocation of faculty time between teaching and research. In Britain the universities receive over 70% of total current income from direct Parliamentary grants. According to Bowen, there appear to have been several consequences from this. (1) The British university system has become somewhat less varied than it might otherwise have been. (2) The government has exerted its influence to push the universities into accepting more students than they might have chosen to accept. While this may or may not have had deleterious effects on the quality of instruction, it has meant that the British academic has had less time and facilities to pursue research than his American counterpart has had. (3) On the other hand, because government grants in England are not generally tied (as in the U.S.) to the sponsorship of particular research projects, the British scientist is given greater rein to choose his own questions for investigation. That is, the "block grant" system is favorable for the scientist's autonomy, if not the university's.

Point (2) above is certainly an expected outcome. All people in Britain are taxed to support the universities; this fact reinforces the feeling that the universities should be open to all *qualified* students. On the other hand, there is much evidence to show that lower-class children are not well served by the primary and secondary schools of the country. There is the further suspicion that Oxbridge, the apex of the university system, favors Public School graduates. Now, when it turns out that many more students gain the formal (examination) qualifications for entry than can be admitted to the university, all the above factors push the government toward bringing pressure on the

universities to accept more students than their traditional notions would lead them to do. But the fact that most university income is drawn from Parliamentary grants is only one factor to account for the government's position.

Bowen would like, I believe, to see a "meeting in the middle of the Atlantic," which is to say that he feels the federal government should make some general-purpose money available to the institutions of higher education but he would not like to see this country go so far in this direction as Britain. For England, he suggests that greater use be made of tuition fees. The basis for the recommendation in each case is to keep the government's influence over educational policy within bounds.

The last essay, "British University Salaries," is an analysis of how the universities respond to market differentials in recruiting and retaining staff. British universities operate under what is essentially a single salary schedule. However, it has been possible to give special recognition to scientists and technologists, in response to the high level of demand for the services of these people in the British economy. The form of recognition, and this is what is interesting, is different for the two groups (promotion for scientists and extrarapid salary advancement for technologists). I suspect there are lessons in this third article for those public school administrators who deal with salary and recruitment problems.

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THE TYRANNY OF SCHOOLING.

by Lewis Anthony Dexter.

New York: Basic Books, Inc., 1964,
176 pp. \$4.50.

. . . as Americans, we are necessarily

both one and many, both a people following the same road to a joint future and a set of individuals following scattered roads as gifts and circumstances dictate. But though flat and truistic this double fact is the foundation of this report. Simple in itself, it is far from simple in its consequences. It means that, though common aims must bind together the whole educational system, there exists no one body of knowledge, no single system of instruction equally valid for every part of it.*

The above statement from the Harvard Report on General Education in a Free Society published in 1945, might well have been the prologue to Professor Dexter's book. One could even delve back further into history and quote from *The Republic* in which Plato states:

Citizens . . . you are brothers, yet God had framed you differently. Some of you have the power of command, and in the composition of these He has mingled gold . . . others He has made of silver to be auxiliaries; others again who are to be husbandmen and craftsmen He has composed of brass and iron . . . If the son of a gold or silver parent has an admixture of brass and iron, then nature orders a transposition of ranks and the eye of the ruler must not be pitiful toward the child because he has to descend in the scale . . . just as there may be sons of artisans who having an admixture of gold and silver in them, are raised to honor . . . For an oracle says that when a man of brass or iron guards the State, it will be destroyed.

* Report of the Harvard Committee, *General Education in a Free Society*. Cambridge, Massachusetts: Harvard University Press, 1945. 267 pp.

The Tyranny of Schooling discusses the school systems and their effects on non-academic students; the nature of retardation; the relationship of "stupidity" (author's term) and social competence; the dilemma of compulsory education and its effect on a large group of academically inadequate individuals.

Professor Dexter makes quite clear that his book will not present practical prescriptions relative to the problem but will provide an analysis and attack on how the less intellectually endowed are discriminated against in the modern school.

There are many statements in the book that would require study and substantiation. To the layman, these moot generalizations might cause confusion and concern.

Following are some of the opinions expressed that might be challenged:

In fact, "the stupid," high-grade retardates are in many school systems, communities, and environments more real and serious victims of discrimination and prejudice than Negroes or American Indians. (p. 5)

. . . the high-grade retarded are often denied normal civil rights, with accusation regarded as sufficient basis for institutionalizing them in many jurisdictions. (p. 20)

. . . the present stringent laws against child labor have, in their turn, gone so far as to make life needlessly difficult and miserable for many high-grade retardates, as well as for other juveniles. (p. 28)

. . . middle-class male Americans suffer more nervousness and worry from being regarded as stupid than from anything else other than fears about sexual potency. (p. 32)

. . . the number of people who are actually dissatisfied because they are

not millionaires is relatively few, whereas the number of people who are dissatisfied because they are not intellectually perfect is large. (p. 42)

... in middle-class U.S. society, cleanliness is perhaps the only virtue greater than intellectual normality, and the child soon learns that he is far more likely to provoke trouble by being intellectually subnormal or dirty than by being blasphemous, malicious, or cruel to his juniors, or even cheating at school work. (p. 52)

One of the difficulties inherent in any description of a school population is again evident in Professor Dexter's book. Although he uses the term "high grade retarded" throughout the volume, and does question the definition of retardation (p. 104), he does not clearly delineate between the high-grade retarded identified and placed in a special program and the same student who, for many reasons, is not recognized and spends his entire life in the general education program.

If, as the author states, he is confining himself to the so-called "moron," whom our measurement colleagues characterize as a person with an IQ below 70 or 75, then it is important to recognize that in most school systems for every child so identified and placed in a special class program there is one of comparable ability in the regular grades. Professor Dexter does give some thought to this in the footnotes on pages 95 and 96, but to the uninitiated this can lead to misinterpretation.

The Tyranny of Schooling does emphasize the need for a complete overhaul of school curricula as it now exists for the population referred to as non-academic. Professor Dexter rightly states:

It is highly probable that the school

has actually created the whole problem of retardation as it affects the "moron," whose lack of intelligence is no barrier to normal functioning in most areas of life and who does not suffer from any serious physiological or nervous defect. (This includes the great majority of morons, since only a small proportion suffer from some other severe, observable, physiological defect.) (pp. 4-5)

This exposition agrees with the recommendations of the World Health Organization which in 1954 proposed that we use the term "mental sub-normality" to cover the entire field, with two divisions based on causative factors. Mental Deficiency would include those cases where there is evident pathology of the nervous system, and mental retardation would include the children who seem to be functioning on this level because of cultural, social, economic or psychological reasons.

Professor Dexter raises a very important and stimulating issue when he questions the over-emphasis today on "staying in school," "getting a diploma." One need but listen to the radio or television to hear a bombardment of fear-provoking statements implying that the person without a high school diploma may as well reconcile himself to a life of unemployment. And in programs initiated after failure in high school, the emphasis is on the functional aspects of job-training, job placement and job adjustment.

The Tyranny of Schooling re-emphasizes a school problem that is plaguing educators throughout the nation but which seldom gets the frank and realistic treatment accorded it by Professor Dexter.

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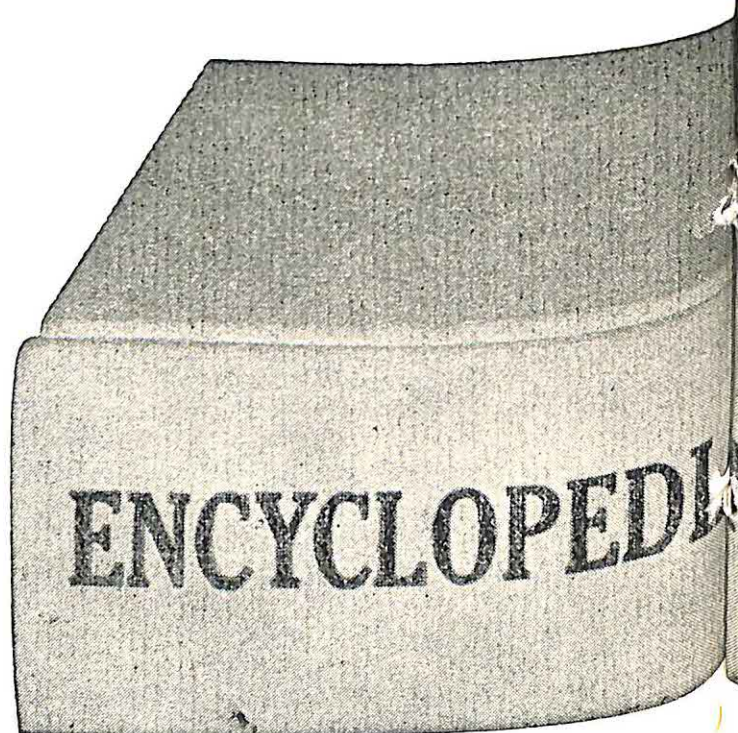
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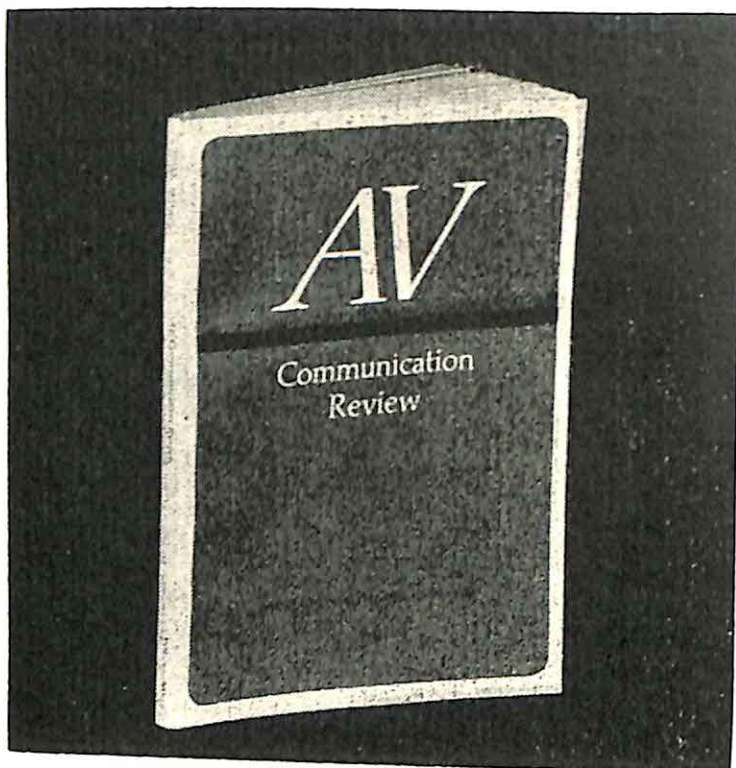


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The author synthesizes and examines three philosophical models of teaching and suggests new criteria for assessing the purposes of education.

ISRAEL SCHEFFLER

Harvard University

Philosophical Models of Teaching*

I. INTRODUCTION

Teaching may be characterized as an activity aimed at the achievement of learning, and practiced in such manner as to respect the student's intellectual integrity and capacity for independent judgment. Such a characterization is important for at least two reasons: First, it brings out the intentional nature of teaching, the fact that teaching is a distinctive goal-oriented activity, rather than a distinctively patterned sequence of behavioral steps executed by the teacher. Secondly, it differentiates the activity of teaching from such other activities as propaganda, conditioning, suggestion, and indoctrination, which are aimed at modifying the person but strive at all costs to avoid a genuine engagement of his judgment on underlying issues.

This characterization of teaching, which I believe to be correct, fails, nevertheless, to answer certain critical questions of the teacher: What sort of learning shall I aim to achieve? In what does such learning consist? How shall I strive to achieve it? Such questions are, respectively, normative, epistemological, and empirical in import, and the answers that are provided for them give point and substance to the educational enterprise. Rather than trying to separate these questions, however, and deal with each abstractly and explicitly, I should like, on the present occasion, to approach them indirectly and as a

* This paper was presented at Brown University as the Marshall Woods lecture on Education for 1964. Variant versions were delivered to the Harvard-Lexington Summer Program for 1964, and to the Boston University Philosophy Club.

group, through a consideration of three influential models of teaching, which provide, or at any rate suggest, certain relevant answers. These models do not so much aim to *describe* teaching as to *orient* it, by weaving a coherent picture out of epistemological, psychological, and normative elements. Like all models, they simplify, but such simplification is a legitimate way of highlighting what are thought to be important features of the subject. The primary issue, in each case, is whether these features are indeed critically important, whether we should allow our educational thinking to be guided by a model which fastens upon them, or whether we should rather reject or revise the model in question. Although I shall mention some historical affiliations of each model, I make no pretense to historical accuracy. My main purpose is, rather, systematic or dialectical, that is, to outline and examine the three models and to see what, if anything, each has to offer us in our own quest for a satisfactory conception of teaching. I turn, then, first to what may be called the "impression model."

II. THE IMPRESSION MODEL

The impression model is perhaps the simplest and most widespread of the three, picturing the mind essentially as sifting and storing the external impressions to which it is receptive. The desired end result of teaching is an accumulation in the learner of basic elements fed in from without, organized and processed in standard ways, but, in any event, not generated by the learner himself. In the empiricist variant of this model generally associated with John Locke, learning involves the input by experience of simple ideas of sensation and reflection, which are clustered, related, generalized, and retained by the mind. Blank at birth, the mind is thus formed by its particular experiences, which it keeps available for its future use. In Locke's words, (Bk. II, Ch. I, Sec. 2 of the *Essay Concerning Human Understanding*):

Let us then suppose the mind to be, as we say, white paper, void of all characters, without any ideas; how comes it to be furnished? Whence comes it by that vast store, which the busy and boundless fancy of man has painted on it with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in one word, From experience; in that all our knowledge is founded, and from that it ultimately derives itself. Our observation, employed either about external sensible objects, or about the internal operations of our minds, perceived and reflected on by ourselves, is that which supplies our understandings with all the materials of thinking. These two are the fountains of knowledge, from whence all the ideas we have, or can naturally have, do spring.

Teaching, by implication, should concern itself with exercising the mental powers engaged in receiving and processing incoming ideas, more particu-

larly powers of perception, discrimination, retention, combination, abstraction, and representation. But, more important, teaching needs to strive for the optimum selection and organization of this experiential input. For potentially, the teacher has enormous power; by controlling the input of sensory units, he can, to a large degree, shape the mind. As Dewey remarked,¹

Locke's statements . . . seemed to do justice to both mind and matter. . . . One of the two supplied the matter of knowledge and the object upon which the mind should work. The other supplied definite mental powers, which were few in number and which might be trained by specific exercises.

The process of learning in the child was taken as paralleling the growth of knowledge generally, for all knowledge is constructed out of elementary units of experience, which are grouped, related, and generalized. The teacher's object should thus be to provide data not only useful in themselves, but collectively rich enough to support the progressive growth of adult knowledge in the learner's mind.

The impression model, as I have sketched it, has certain obvious strong points. It sets forth the appeal to experience as a general tool of criticism to be employed in the examination of all claims and doctrines, and it demands that they square with it. Surely such a demand is legitimate, for knowledge does rest upon experience in some way or other. Further, the mind is, in a clear sense, as the impression model suggests, a function of its particular experiences, and it is capable of increased growth with experience. The richness and variety of the child's experiences are thus important considerations in the process of educational planning.

The impression model nevertheless suffers from fatal difficulties. The notions of absolutely simple ideas and of abstract mental powers improvable through exercise have been often and rightly criticized as mythological:² Simplicity is a relative, not an absolute, concept and reflects a particular way of analyzing experience; it is, in short, not given but made. And mental powers or faculties invariant with subject matter have, as everyone knows, been expunged from psychology on empirical as well as theoretical grounds. A more fundamental criticism, perhaps, is that the implicit conception of the growth of knowledge is false. Knowledge is not achieved through any standard set of operations for the processing of sensory particulars, however conceived. Knowledge is, first and foremost, embodied in language, and involves a conceptual apparatus not derivable from the sensory data but imposed upon

¹ John Dewey, *Democracy and Education*. New York: The Macmillan Company, 1916, p. 62.

² Dewey, *Ibid.*, "the supposed original faculties of observation, recollection, willing, thinking, etc., are purely mythological. There are no such ready-made powers waiting to be exercised and thereby trained."

them. Nor is such apparatus built into the human mind; it is, at least in good part a product of guesswork and invention, borne along by culture and by custom. Knowledge further involves *theory*, and theory is surely not simply a matter of generalizing the data, even assuming such data organized by a given conceptual apparatus. Theory is a creative and individualistic enterprise that goes beyond the data in distinctive ways, involving not only generalization, but postulation of entities, deployment of analogies, evaluation of relative simplicity, and, indeed, invention of new languages. Experience is relevant to knowledge through providing tests of our theories; it does not automatically generate these theories, even when processed by the human mind. That we have the theories we do is, therefore, a fact, not simply about the human mind, but about our history and our intellectual heritage.

In the process of learning, the child gets not only sense experiences but the language and theory of his heritage in complicated linkages with discriminable contexts. He is heir to the complex culture of belief built up out of innumerable creative acts of intellect of the past, and comprising a patterned view of the world. To give the child even the richest selection of sense data or particular facts alone would in no way guarantee his building up anything resembling what we think of as knowledge, much less his developing the ability to retrieve and apply such knowledge in new circumstances.

A *verbal* variant of the impression model of teaching naturally suggests itself, then, as having certain advantages over the *sensory* version we have just considered: What is to be impressed on the mind is not only sense experience but language and, moreover, accepted theory. We need to feed in not only sense data but the correlated verbal patterning of such data, that is, the *statements* about such data which we ourselves accept. The student's knowledge consists in his stored accumulation of these statements, which have application to new cases in the future. He is no longer, as before, assumed capable of generating our conceptual heritage by operating in certain standard ways on his sense data, for part of what *we* are required to feed into his mind is this very heritage itself.

This verbal variant, which has close affinities to contemporary behaviorism, does have certain advantages over its predecessor, but retains grave inadequacies still, as a model of teaching. To *store* all accepted theories is not the same as being able to *use* them properly in context. Nor, even if some practical correlation with sense data is achieved, does it imply an understanding of what is thus stored, nor an appreciation of the theoretical motivation and experimental evidence upon which it rests.

All versions of the impression model, finally, have this defect: They fail to make adequate room for radical *innovation* by the learner. We do not, after all, feed into the learner's mind all that we hope he will have as an end

result of our teaching. Nor can we construe the critical surplus as generated in standard ways out of materials we do supply. We do not, indeed cannot, so construe insight, understanding, new applications of our theories, new theories, new achievements in scholarship, history, poetry, philosophy. There is a fundamental gap which teaching cannot bridge simply by expansion or reorganization of the curriculum input. This gap sets *theoretical* limits to the power and control of the teacher; moreover, it is where his control ends that his fondest hopes for education begin.

III. THE INSIGHT MODEL

The next model I shall consider, the "insight model," represents a radically different approach. Where the impression model supposes the teacher to be conveying ideas or bits of knowledge into the student's mental treasury, the insight model denies the very possibility of such conveyance. Knowledge, it insists, is a matter of vision, and vision cannot be dissected into elementary sensory or verbal units that can be conveyed from one person to another. It can, at most, be stimulated or prompted by what the teacher does, and if it indeed occurs, it goes beyond what is thus done. Vision defines and organizes particular experiences, and points up their significance. It is vision, or insight into meaning, which makes the crucial difference between simply storing and reproducing learned sentences, on the one hand, and understanding their basis and application, on the other.

The insight model is due to Plato, but I shall here consider the version of St. Augustine, in his dialogue, "The Teacher,"³ for it bears precisely on the points we have dealt with. Augustine argues roughly as follows: The teacher is commonly thought to convey knowledge by his use of language. But knowledge, or rather *new* knowledge, is not conveyed simply by words sounding in the ear. Words are mere noises unless they signify realities present in some way to the mind. Hence a paradox: If the student already knows the realities to which the teacher's words refer, the teacher teaches him nothing new. Whereas, if the student does not know these realities, the teacher's words can have no meaning for him, and must be mere noises. Augustine concludes that language must have a function wholly distinct from that of the signification of realities; it is used to *prompt* people in certain ways. The teacher's words, in particular, prompt the student to search for realities not already known by him. Finding these realities, which are illuminated for him by internal

³ *Ancient Christian Writers*, No. 9, St. Augustine, "The Teacher," edited by J. Quasten and J. C. Plumpe, translated and annotated by J. M. Colleran, Newman Press, Westminster, Md: 1950; relevant passages may also be found in Kingsley Price, *Education and Philosophical Thought*, Boston: Allyn and Bacon, Inc., 1962, pp. 145-159.

vision, he acquires new knowledge for himself, though indirectly as a result of the teacher's prompting activity. To *believe* something simply on the basis of authority or hearsay is indeed possible, on Augustine's view; to *know* it is not. Mere beliefs may, in his opinion, of course, be useful; they are not therefore knowledge. For knowledge, in short, requires the individual himself to have a grasp of the realities lying behind the words.

The insight model is strong where the impression model is weakest. While the latter, in its concern with the conservation of knowledge, fails to do justice to innovation, the former addresses itself from the start to the problem of *new* knowledge resulting from teaching. Where the latter stresses atomic manipulable bits at the expense of understanding, the former stresses primarily the acquisition of insight. Where the latter gives inordinate place to the feeding in of materials from the outside, the former stresses the importance of firsthand inspection of realities by the student, the necessity for the student to earn his knowledge by his own efforts.

I should argue, nevertheless, that the case offered by Augustine for the prompting theory is not, as it stands, satisfactory. If the student does not know the realities behind the teacher's words, these words are, presumably, mere noises and can serve only to prompt the student to inquire for himself. Yet if they *are* mere noises, how can they even serve to prompt? If they are not understood in any way by the student, how can they lead him to search for the appropriate realities which underlie them? Augustine, furthermore, allows that a person may believe, though not know, what he accepts on mere authority, without having confronted the relevant realities. Such a person might, presumably, pass from the state of belief to that of knowledge, as a result of prompting, under certain conditions. But what, we may ask, could have been the content of his initial belief if the formulation of it had been literally unintelligible to him? The prompting theory, it seems, will not do as a way of escaping Augustine's original paradox.

There is, however, an easier escape. For the paradox itself rests on a confusion of the meaning of *words* with that of *sentences*. Let me explain. Augustine holds that words acquire intelligibility only through acquaintance with reality. Now it may perhaps be initially objected that understanding a word does not always require acquaintance with its signified reality, for words may also acquire intelligibility through definition, lacking such direct acquaintance. But let us waive this objection and grant, for the sake of argument, that understanding a word *always* does require such acquaintance; it still does not follow that understanding a true sentence similarly requires acquaintance with the state of affairs which it represents. We understand new sentences all the time, on the basis of an understanding of their constituent words and of the grammar by which they are concatenated. Thus, given a sentence sig-

nifying some fact, it is simply not true that, unless the student already knows this fact, the sentence must be mere noise to him. For he can understand its meaning indirectly, by a synthesis of its parts, and be led thereafter to inquire whether it is, in reality, true or false.

If my argument is correct, then Augustine's paradox of teaching can be simply rejected, on the ground that we *can* understand statements before becoming acquainted with their signified realities. It follows that the teacher can indeed *inform* the student of new facts by means of language. And it further seems to follow that the basis for Augustine's prompting theory of teaching wholly collapses. We are back to the impression model, with the teacher using language not to prompt the student to inner vision, but simply to inform him of new facts.

The latter conclusion seems to me, however, mistaken. For it does *not* follow that the student will *know* these new facts simply because he has been *informed*; on this point Augustine seems to me perfectly right. It is knowing, after all, that Augustine is interested in, and knowing requires something more than the receipt and acceptance of true information. It requires that the student earn the right to his assurance of the truth of the information in question. New *information*, in short, can be intelligibly conveyed by statements; new *knowledge* cannot. Augustine, I suggest, confuses the two cases, arguing in effect for the impossibility of conveying new knowledge by words, on the basis of an alleged similar impossibility for information. I have been urging the falsity of the latter premise. But if Augustine's premise is indeed false, his conclusion as regards knowledge seems to me perfectly true: To *know* the proposition expressed by a sentence is more than just to have been told it, to have grasped its meaning, and to have accepted it. It is to have earned the right, through one's own effort or position, to an assurance of its truth.

Augustine puts the matter in terms of an insightful searching of reality, an inquiry carried out by oneself, and resting in no way on authority. Indeed, he is perhaps too austere individualistic in this regard, rejecting even legitimate arguments from authority as a basis for knowledge. But his main thesis seems to me correct: One cannot convey new knowledge by words alone. For knowledge is not simply a storage of information by the learner.

The teacher does, of course, employ *language*, according to the insight model, but its primary function is not to impress his statements on the student's mind for later reproduction. The teacher's statements are, rather, instrumental to the student's own search of reality and vision thereof; teaching is consummated in the student's own insight. The reference to such insight seems to explain, at least partially, how the student can be expected to apply his learning to new situations in the future. For, having acquired this learning not merely by external suggestion but through a personal engagement with

reality, the student can appreciate the particular fit which his theories have with real circumstances, and, hence, the proper occasions for them to be brought into play.

There is, furthermore, no reason to construe adoption of the insight model as eliminating the impression model altogether. For the impression model, it may be admitted, does reflect something genuine and important, but mislocates it. It reflects the increase of the culture's written lore, the growth of knowledge as a public and recorded possession. Furthermore, it reflects the primary importance of conserving such knowledge, as a collective heritage. But knowledge in this public sense has nothing to do with the process of learning and the activity of teaching, that is, with the growth of knowledge in the individual learner. The public treasury of knowledge constitutes a basic source of materials for the teacher, but he cannot hope to transfer it bit by bit in growing accumulation within the student's mind. In conducting his teaching, he must rather give up the hope of such simple transfer, and strive instead to encourage individual insight into the meaning and use of public knowledge.

Despite the important emphases of the insight model which we have been considering, there are, however, two respects in which it falls short. One concerns the simplicity of its constituent notion of insight, or vision, as a condition of knowing; the other relates to its specifically cognitive bias, which it shares with the impression model earlier considered. First, the notion that what is crucial in knowledge is a vision of underlying realities, a consulting of what is found within the mind, is far too simple. Certainly, as we have seen, the knower must satisfy *some* condition beyond simply being informed, in order to have the right to his assurance on the matter in question. But to construe this condition in terms of an intellectual inspection of reality is not at all satisfactory. It is plausible only if we restrict ourselves to very simple cases of truths accessible to observation or introspection. As soon as we attempt to characterize the knowing of propositions normally encountered in practical affairs, in the sciences, in politics, history, or the law, we realize that the concept of a *vision of reality* is impossibly simple. Vision is just the wrong metaphor. What seems indubitably more appropriate in all these cases of knowing is an emphasis on the processes of deliberation, argument, judgment, appraisal of reasons *pro* and *con*, weighing of evidence, appeal to principles, and decision-making, none of which fits at all well with the insight model. This model, in short, does not make adequate room for principled deliberation in the characterization of knowing. It is in terms of such principled deliberation, or the potentiality for it, rather than in terms of simple vision, that the distinctiveness of knowing is primarily to be understood.

Secondly, the insight model is specifically cognitive in emphasis, and can-

not readily be stretched so as to cover important aspects of teaching. We noted above, for example, that the application of truths to new situations is somewhat better off in the insight than in the impression model, since the appropriateness of a truth for new situations is better judged with awareness of underlying realities than without. But a judgment of appropriateness is not all there is to application; habits of proper execution are also required, and insight itself does not necessitate such habits. Insight also fails to cover the concept of character and the related notions of attitude and disposition. Character, it is clear, goes beyond insight as well as beyond the impression of information. For it involves general principles of conduct logically independent of both insight and the accumulation of information. Moreover, what has been said of character can be applied also to the various institutions of civilization, including those which channel cognition itself. Science, for example, is not just a collection of true insights; it is embodied in a living tradition composed of demanding principles of judgment and conduct. Beyond the cognitive insight, lies the fundamental commitment to principles by which insights are to be criticized and assessed, in the light of publicly available evidence or reasons. In sum, then, the shortcoming of the insight model may be said to lie in the fact that it provides no role for the concept of *principles*, and the associated concept of *reasons*. This omission is very serious indeed, for the concept of principles and the concept of reasons together underlie not only the notions of rational deliberation and critical judgment, but also the notions of rational and moral conduct.

IV. THE RULE MODEL

The shortcoming of the insight model just discussed is remedied in the "rule model," which I associate with Kant. For Kant, the primary philosophical emphasis is on reason, and reason is always a matter of abiding by general rules or principles. Reason stands always in contrast with inconsistency and with expediency, in the judgment of particular issues. In the cognitive realm, reason is a kind of justice to the evidence, a fair treatment of the merits of the case, in the interests of truth. In the moral realm, reason is action on principle, action which therefore does not bend with the wind, nor lean to the side of advantage or power out of weakness or self-interest. Whether in the cognitive or the moral realm, reason is always a matter of treating equal reasons equally, and of judging the issues in the light of general principles to which one has bound oneself.

In thus binding myself to a set of principles, I act freely; this is my dignity as a being with the power of choice. But my own free commitment obligates me to obey the principles I have adopted, when they rule against me. This

is what fairness or consistency in conduct means: if I could judge reasons differently when they bear on my interests, or disregard my principles when they conflict with my own advantage, I should have no principles at all. The concepts of *principles*, *reasons*, and *consistency* thus go together and they apply both in the cognitive judgment of beliefs and the moral assessment of conduct. In fact, they define a general concept of rationality. A rational man is one who is consistent in thought and in action, abiding by impartial and generalizable principles freely chosen as binding upon himself. Rationality is an essential aspect of human dignity and the rational goal of humanity is to construct a society in which such dignity shall flower, a society so ordered as to adjudicate rationally the affairs of free rational agents, an international and democratic republic. The job of education is to develop character in the broadest sense, that is, principled thought and action, in which the dignity of man is manifest.

In contrast to the insight model, the rule model clearly emphasizes the role of principles in the exercise of cognitive judgment. The strong point of the insight model can thus be preserved: The knower must indeed satisfy a further condition beyond the mere receiving and storing of a bit of information. But this condition need not, as in the insight model, be taken to involve simply the vision of an underlying reality; rather, it generally involves the capacity for a principled assessment of reasons bearing on justification of the belief in question. The knower, in short, must typically earn the right to confidence in his belief by acquiring the capacity to make a reasonable case for the belief in question. Nor is it sufficient for this case to have been explicitly taught. What is generally expected of the knower is that his autonomy be evidenced in the ability to construct and evaluate fresh and alternative arguments, the power to innovate, rather than just the capacity to reproduce stale arguments earlier stored. The emphasis on innovation, which we found to be an advantage of the insight model, is thus capable of being preserved by the rule model as well.

Nor does the rule model in any way deny the psychological phenomenon of insight. It merely stresses that insight itself, wherever it is relevant to decision or judgment, is filtered through a network of background principles. It brings out thereby that insight is not an isolated, momentary, or personal matter, that the growth of knowledge is not to be construed as a personal interaction between teacher and student, but rather as mediated by general principles definitive of rationality.

Furthermore, while the previous models, as we have seen, are peculiarly and narrowly *cognitive* in relevance, the rule model embraces *conduct* as well as cognition, itself broadly conceived as including processes of judgment and deliberation. Teaching, it suggests, should be geared not simply to the transfer

of information nor even to the development of insight, but to the inculcation of principled judgment and conduct, the building of autonomous and rational character which underlies the enterprises of science, morality and culture. Such inculcation should not, of course, be construed mechanically. Rational character and critical judgment grow only through increased participation in adult experience and criticism, through treatment which respects the dignity of learner as well as teacher. We have here, again, a radical gap which cannot be closed by the teacher's efforts alone. He must rely on the spirit of rational dialogue and critical reflection for the development of character, acknowledging that this implies the freedom to reject as well as to accept what is taught. Kant himself holds, however, that rational principles are somehow embedded in the structure of the human mind, so that education builds on a solid foundation. In any event, the stakes are high, for on such building by education depends the prospect of humanity as an ideal quality of life.

There is much of value in the rule model, as I have sketched it. Certainly, rationality is a fundamental cognitive and moral virtue and as such should, I believe, form a basic objective of teaching. Nor should the many historical connotations of the term "rationality" here mislead us. There is no intent to suggest a faculty of reason, nor to oppose reason to experience or to the emotions. Nor is rationality being construed as the process of making logical deductions. What is in point here is simply the autonomy of the student's judgment, his right to seek reasons in support of claims upon his credibilities and loyalties, and his correlative obligation to deal with such reasons in a principled manner.

Moreover, adoption of the rule model does not necessarily exclude what is important in the other two models; in fact, it can be construed quite plausibly as supplementing their legitimate emphasis. For, intermediate between the public treasury of accumulated lore mirrored by the impression model, and the personal and intuitive grasp of the student mirrored by the insight model, it places general principles of rational judgment capable of linking them.

Yet, there is something too formal and abstract in the rule model, as I have thus far presented it. For the operative principles of rational judgment at any given time are, after all, much more detailed and specific than a mere requirement of formal consistency. Such consistency is certainly fundamental, but the way its demands are concretely interpreted, elaborated, and supplemented in any field of inquiry or practice, varies with the field, the state of knowledge, and the advance of relevant methodological sophistication. The concrete rules governing inference and procedure in the special sciences, for example, are surely not all embedded in the human mind, even if the demands of formal consistency, as such, *are* universally compelling. These

concrete rules and standards, techniques and methodological criteria evolve and grow with the advance of knowledge itself; they form a live tradition of rationality in the realm of science.

Indeed, the notion of tradition is a better guide here, it seems to me, than appeal to the innate structure of the human mind. Rationality in natural inquiry is embodied in the relatively young tradition of science, which defines and redefines those principles by means of which evidence is to be interpreted and meshed with theory. Rational judgment in the realm of science is, consequently, judgment which accords with such principles, as crystallized at the time in question. To teach rationality in science is to interiorize these principles in the student, but furthermore, to introduce him to the live and evolving *tradition* of natural science, which forms their significant context of development and purpose.

Scholarship in history is subject to an analogous interpretation, for beyond the formal demands of reason, in the sense of consistency, there is a concrete tradition of technique and methodology defining the historian's procedure and his assessment of reasons for or against particular historical accounts. To teach rationality in history is, in effect, here also to introduce the student to a live tradition of historical scholarship. Similar remarks might be made also with respect to other areas, e.g. law, philosophy and the politics of democratic society. The fundamental point is that rationality cannot be taken simply as an abstract and general ideal. It is embodied in *multiple evolving traditions*, in which the basic condition holds that issues are resolved by reference to *reasons*, themselves defined by *principles* purporting to be impartial and universal. These traditions should, I believe, provide an important focus for teaching.

V. CONCLUSION

I have intimated that I find something important in each of the models we have considered. The impression model reflects, as I have said, the cumulative growth of knowledge in its *public* sense. Our aim in teaching should surely be to preserve and extend this growth. But we cannot do this by storing it piecemeal within the learner. We preserve it, as the insight model stresses, only if we succeed in transmitting the live spark that keeps it growing, the insight which is a product of each learner's efforts to make sense of public knowledge in his own terms, and to confront it with reality. Finally, as the rule model suggests, such confrontation involves deliberation and judgment, and hence presupposes general and impartial principles governing the assessment of reasons bearing on the issues. Without such guiding principles, the very conception of rational deliberation collapses, and the concepts of rational

and moral conduct, moreover, lose their meaning. Our teaching needs thus to introduce students to those principles we ourselves acknowledge as fundamental, general, and impartial, in the various departments of thought and action.

We need not pretend that these principles of ours are immutable or innate. It is enough that they are what we ourselves acknowledge, that they are the best we know, and that we are prepared to improve them should the need and occasion arise. Such improvement is possible, however, only if we succeed in passing on, too, the multiple live traditions in which they are embodied, and in which a sense of their history, spirit, and direction may be discerned. Teaching, from this point of view, is clearly not, as the behaviorists would have it, a matter of the teacher's shaping the student's behavior or of controlling his mind. It is a matter of passing on those traditions of principled thought and action which define the rational life for teacher as well as student.

As Professor Richard Peters has recently written,⁴

The critical procedures by means of which established content is assessed, revised, and adapted to new discoveries have public criteria written into them that stand as impersonal standards to which both teacher and learner must give their allegiance. . . . To liken education to therapy, to conceive of it as imposing a pattern on another person or as fixing the environment so that he 'grows', fails to do justice to the shared impersonality both of the content that is handed on and of the criteria by reference to which it is criticized and revised. The teacher is not a detached operator who is bringing about some kind of result in another person which is external to him. His task is to try to get others on the inside of a public form of life that he shares and considers to be worthwhile.

In teaching, we do not impose our wills on the student, but introduce him to the many mansions of the heritage in which we ourselves strive to live, and to the improvement of which we are ourselves dedicated.

⁴ *Education as Initiation*, an inaugural lecture delivered at the University of London Institute of Education, 9 December 1963; published for The University of London Institute of Education by Evans Brothers, Ltd., London.

The Director of a Freedom School describes the operation, purpose and elan of a significant venture into the politics of education.

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Mississippi's Freedom Schools: The Politics of Education

All education is political. In Mississippi, at least, it is impossible to find this trite. There, it is inescapable that the educational system furthers the political, that the kind of learning the individual gets depends completely upon the role he is supposed to live.

A thirteen year old Jackson, Mississippi girl, sitting within a Freedom School circle this summer, described the events of the last day, the previous year, in her public (segregated) junior high school. Students in a high school nearby had asked the students in "Shirley's" school to join them in a protest-demonstration against local school conditions and procedures. "Shirley's" (Negro) teacher had threatened the class with failure for the year, should they walk out to join the demonstrators. Most of the class was intimidated, but not "Shirley" and several of her friends. She left, she said, because she knew that she had not failed for the year, she knew she had earned good grades, and she knew that it was right to join the demonstrators. As she and her friends reached the downstairs floor, they met, head on, the (Negro) principal "who was coming at us with a board." They turned, fled, back-tracked through the cafeteria and out the back way to join the demonstrators.

The Negro school child in Mississippi, like "Shirley," associates the school he attends, in spite of the color of his teachers and principal, with the white world outside him—the police, the White Citizens' Council, the mayor or sheriff, the governor of his state. And the school child's instinctive vision is

perfectly correct. His teachers are either timid and quiescently part of the system or they are actively extra-punitive, dictatorial, hostile, vengeful, or worse. Sometimes his teachers are badly-trained, misinformed, but even when they know just that, they remain fearfully bound to the system that made them. The teacher with the ruler or iron chain or whip is himself caught in a power structure that allows him to teach only by rote to rote-learners. You learn this, he says, and you too can learn to get along. Get used to the violence, get used to being struck, get used to taking orders, for that is the way life is on the outside. You too can learn to follow the rules and get to sit up here, ruler in hand, ready to strike out at anything out of line.

It is possible to sympathize with the middle-class Negro teacher caught between his own desire to rise from the poverty around him and his fear of the white power structure that controls his ability to rise. For the Negro teacher and his Negro principal are directed by white school superintendents, themselves under the direction of other white political forces. In Negro schools, the intercom is used by the principal to intimidate and harass the teacher. The principal, in turn, is harassed by others. And only the "Shirley," finally, is able to stand up and sing, with her friends and associates in Freedom Schools:

Before I'll be a slave
I'll be buried in my grave
And go home to my Lord and be free.

If the official public school system of Mississippi is geared and oiled to operate efficiently for the status quo, it is no wonder, then, that the civil rights movement should have conceived of the Freedom School. But would children for whom a school was an unpleasant training ground for a repressive society come, voluntarily, even to a "Freedom" school? Of course, voluntarily was the first cue. No one had to come, and once there, no "attendance" was taken. You came if you wanted to and you stayed if you were interested and you left if you felt like leaving. Your teacher, moreover, was "Tom" or "Leo" or "Gene," who shook your hand, called you by your first name, and said how glad he was to meet you. In your "class," your teacher sat with you in a circle, and soon you got the idea that you could say what you thought and that no one, least of all the teacher, would laugh at you or strike you. Soon, too, you got the idea that you might disagree with your teacher, white or black, and get a respectful hearing, that your teacher was really interested in what you thought or felt. Soon you were forgetting about skin colors altogether and thinking about ideas or feelings, about people and events.

As educators, we live in a fool's paradise, or worse in a knave's, if we are unaware that when we are teaching *something* to anyone we are also teaching

everything to that same anyone. When we say we are teaching mathematics to Freddy, we also must admit that we are teaching Freddy what kind of person we are, how we live in the kind of world we control (or the kind of world that controls us), and how he can grow up to be one of the controllers or controlled. Teaching, we become, as so many people have said, a model for Freddy to learn from, quite apart from the mathematics or French or history we may be teaching him. And sometimes we are very "good" models. Sometimes, like "good" parents or "good" political leaders, we teach Freddy to love his neighbors, to honor honesty and integrity, to value the means as well as the ends, to abstain from using and controlling and killing human life. But sometimes we are not so inclined. Sometimes, at our worst, we educators resemble tyrants.

The idea of the Freedom School turns upside down particularly effectively the conventions of many public school systems that have to do with the role of the teacher. The teacher is not to be an omnipotent, aristocratic dictator, a substitute for the domineering parent or the paternalistic state. He is not to stand before rows of students, simply pouring pre-digested, pre-censored information into their brains. The Freedom School teacher is, in fact, to be present not simply to teach, but rather *to learn with* the students. In the democratic and creative sense that Wordsworth understood when he described the poet as "a man among men," the Freedom School teacher is a student among students. He does not have all the answers; his creativity is his ability to communicate with his students, to listen to them as much as they listen to him. The vitality of the teacher, as Freedom Schools would have it, lies in the student's and the teacher's mutual apprehension of life. A Freedom School teacher knows that education is the *drawing out* not of blood from stones, but rather of experience and observation from human beings. He knows that a thirteen year old who has survived his years in Mississippi understands, however fearfully or inarticulately, a great deal about the world he has survived in. The Freedom School teacher is there not as professional manipulator, but as concerned questioner—who really wants to hear what his companions will say, who really wants, himself, to be led by it. And thus he can turn the key to help the student break through the door that confines him—and all without recourse to the same means, authoritarianism, repression, violence, that have kept him locked in.

For much of the month of August, I coordinated and taught in one of Jackson, Mississippi's nine Freedom Schools. Opened on the fifth of August, these were in addition to the more than forty others that functioned through the summer in more than twenty different towns. Like most of the schools around the state, mine was located in the basement of a church. The basement room was acoustically difficult for a single voice and yet many voices

together filled it uncomfortably. How to get attention, even briefly for announcements or for the start of some activity, perhaps the breaking up of the group into small discussion units? On the second day, when my voice had begun to hurt and when clapping my hands had begun to seem ineffectual, I hit accidentally upon the Quakerly method of raising your right hand. The children saw me standing before them, my right hand raised, and for communication's sake, my left index finger against my lips. They began to nudge one another, to raise their own hands, and to place their own fingers on their lips. And very quickly, the room grew quiet. I said, "All hands down," and delighted that the method had worked, added, "Isn't this a lovely way to get silence?" Of course the children responded all together to me and to each other, and we had to begin all over again, right hands raised. But the method did work.

Also on one of the very first days, in the hot afternoon, with the teachers uncomfortable because they had had no lunch, and the children restless because we had not yet solved the problem of outdoor play space, two little boys began to fight. They were small enough so that I could forcibly separate them, but even in the midst of my hot, hungry exasperation, I had a vision of other fights and bigger boys whom I would be unable to pull apart. And from somewhere came the words: "Now, look here, we have few rules in this school, but we do have one important one and that is we do not hit each other—we talk. Understand? We talk here. This is a school for talking. Whenever you feel like hitting someone, remember to talk instead." The children looked puzzled and I said it all again. And then I sat down—in the midst of chaos—to talk with the two little boys about their fight. There were more fights in the next several days, but my words had begun to spread so that some of the older children were repeating them to the younger ones. And while we were never entirely free from an occasional blow—it was virtually impossible, for example, to keep older brothers from "punishing" their younger siblings—there were few or no fights after the first week.

The Greater Blair Street AME Zion Church, under the direction of Reverend R. M. Richmond, gave us not only shelter and equipment but most of all moral support and friendly protection. We drew our students, regardless of church membership, from the neighborhood. The families in a six to ten block radius ranged from lower-middle class to very poor (incomes from close to nothing to four thousand). The people in the neighborhood, like most of Jackson, were nervous about the arriving Freedom School teachers and were especially loathe to give us housing, for that would signify open support. Reverend Richmond convinced the people next door to give their empty room to the two male teachers. They, Gene Gogol and Tom Timberg, in the company of friendly students-to-be, had been canvassing the neighbor-

hood during the time I was spending getting acquainted with the minister. When they reported back that they had had several offers of spare cots that could be moved elsewhere as well as of food—signs, of course, of a desire to help but without the attendant danger of housing a summer volunteer—we were able to make arrangements to move the beds into the empty room in the house next door to the church.

Our first impressions of the community were not incorrect: the parents continued to be cautious. With few exceptions, we had no contact with parents. But the children, of course, were different. They turned up, they turned out, they were willing to do anything, to go anywhere with us.

As Staughton Lynd, professor of history at Yale and summer director of all Freedom Schools in Mississippi, said, it was "a political decision for any parent to let his child come to a Freedom School." And many parents, in Jackson at least, avoided making that decision. I had assumed that parents knew that their children were attending Freedom School—until the day when I took up the question of sending a representative from our school to the state-wide Freedom School convention in Meridian. Expenses would be paid and the weekend program would be entertaining; I felt certain, that morning, that it would be difficult choosing the one delegate we were allowed to represent us. But to my surprise no one was willing to make a nomination—it was as if they all understood something I did not. I asked for volunteers and got no response again. Then I asked a thirteen year old girl, who had been particularly articulate the day before in a discussion, whether she would like to go. She said, first, only an abrupt "No," but when questioned in disbelieving tones, she admitted to, "Yes, but I can't."

"But why not, then? All your expenses would be paid, and you know you'd enjoy it."

She finally said that her father would not allow her to go, that he disapproved of her association with "the movement" in general, and that he did not approve even of her attending Freedom School. She was deliberately vague about whether or not he knew she was attending. When I asked whether it would help if I went to see him, she first laughed and then urged me most seriously not to. The story repeated itself, with certain variations, around the room.

Two young mothers, both of them relatively new to the neighborhood, were sympathetic enough to the movement and interested enough to issue invitations to us. The mother of a six year old, who sent her daughter to Freedom School, sent word also that she would like to see "the teachers" after school, at which point she invited all of us to a hot dinner the following afternoon at three. Later, she asked to be included in our evening activities. Another mother of a teen-ager, whose own family disapproved of the student's

attending Freedom School, also sent for the teachers, whom she then invited to accompany her to a jazz concert. Later, this mother held a party for the departing teachers and announced her willingness to be of service to Freedom Schools in the future.

Freedom Schools were planned originally with high school students in mind. In most places around the state, when Freedom School opened, *all* children turned up, regardless of publicity about high school students. Eventually, around the state, community centers were founded, first to take care of the younger children, later to function in ways that Freedom School could not or would not. When we opened our Blair Street doors on Wednesday, August 5, at eight a.m., "children," ages three to twenty-three, began to arrive. And of course we turned no one away. They came in twos and threes, sometimes several from a family, the teen-agers holding the hands of their younger brothers and sisters. Fifty-one students arrived throughout that first day and fifty more during the next several days. Some stayed awhile and left, never to appear again. Others stayed that day and came every day thereafter. Some came and disappeared, and then came again to stay to the end.

Nearly half of any total number of children present at the Blair Street School were under the age of ten. For these children we ran a combined school and community center in one of the two basement rooms of the church. Luckily, on the day before school had opened, I had met Leo Reese, a magically personable reading specialist from Gary, Indiana, the father of eleven children, who had volunteered to spend one week in Jackson. Leo, a native Mississippian and a Negro, had been born and raised in Pascagoula, on the Gulf. In the few days that Leo was present, he organized a program for the younger children, and because of his skills, freed three of the four assigned teachers for work with the older students. Later, after Leo had gone, two young women, Shirley Logan, a Jacksonian and a recent college graduate, and her cousin from Chicago, Superior Walker, came to the Blair Street School for a visit and stayed for two weeks to carry on the program with the younger children.

Mornings at Freedom School began slowly without opening bells. On some days we sang freedom songs until the group collected. On one day, August 6, Hiroshima Day, I told the students about what had happened nineteen years ago. On another day, I read from Langston Hughes' poems and then listened to reactions from the students. By nine-thirty, we were usually numerous enough to break into smaller discussion groups. Those children under ten went off to their room, generally for the rest of the day, unless there was to be a special activity in the afternoon. The older students separated sometimes into several age groups for a discussion that occupied most of the morning. The Citizenship Curriculum, about which I shall have more to say later, is

the core of the program shared by all Freedom Schools in Mississippi. There was usually time, an hour before lunch and one after, for two hours of "electives." Negro history, chemistry, biology, English, French, and typing were the subjects settled on by the groups' desires and their teachers' abilities.

The afternoons were particularly hot, and more and more frequent were the noisy visits to the drinking fountain and the lavatories at the back of the church. There was no outdoor play space, but, eventually, teachers began to take groups of students to the playground of a nearby Catholic school that the sisters allowed us to use. One of the older boys organized a softball team and both boys and girls were eager to play ball regardless of the heat. Late in the afternoon (called "evening" in Mississippi) some of the teachers and students joined the regular COFO precinct workers for voter registration work.

The best afternoons at Blair Street were those filled with special events. On opening day, for example, Pete Seeger arrived at one-thirty in the afternoon to give us a private concert. With the whole school present, the very littlest ones asleep in any arms that would hold them, Pete talked first of his recent visit to twenty-seven countries around the world. He told us that all children were the same the world over and that music was a language that flew easily over even the highest walls. He demonstrated his statements by playing and singing Indian, African, Chinese, and Polynesian songs, in each instance allowing the rhythms to illustrate the emotion before offering a translation of the words. "Isn't this a happy song," he said, after singing, in African dialect, "Everybody Loves Saturday Night." He taught the children to sing the foreign words of several songs, and though we didn't know it then, that was the high moment for them. The Blair Street students had no idea that Pete was a famous man, but they wanted to hear more of him and happily turned up that evening to be transported across town to Anderson Chapel where Pete Seeger sang for a packed and overflowing house until his voice gave out.

Films were also a good afternoon activity. On the day we showed the full-length *Oliver Twist* to an audience of more than one hundred, I heard one boy of ten mutter to himself about Oliver, "He sho' is white, but he's a slave just the same." The film ran too late in the afternoon for discussion, but the following morning was filled with questions and talk about child labor. Another group of films were part of a special, state-wide program arranged by Paul Lauter, a professor of English at Smith College. All bearing upon the connections among the struggle for civil rights, non-violence, and the need for world peace, the four films were used by Paul to spark discussions. Two of these films were documentaries, one about Gandhi, the other about the Montgomery, Alabama, bus strike. The students were more interested in talk-

ing, however, about the other pair of films. One was a recent Polish film, *The Magician*. The other, an animated cartoon, *The Hat*, consisted of a dialogue between two soldiers (Dizzie Gillespie—whose music also filled the film—and the British comedian, Dudley Moore) who guard either side of a line, the hat of one falling onto the side of the other as they march. The students were quick to compare lines that divided nations with lines that divided people within nations. They remembered, during the discussion that followed, relevant details through which the film attempted to show that talking, in human terms, helps to erase lines.

Evening activities provided still other kinds of experience for the Freedom School student. Apart from concerts, there were mass meetings, at one of which, for example, A. Philip Randolph spoke along with leading Jackson ministers. Best of all was the Free Southern Theatre's production of *In White America*, which toured the state as part of a continuing program of special entertainment for Freedom Schools. Most of these students had never seen live theatre, and certainly not a play about themselves in history. Their response as audience was continuously energetic, especially since, as they reported the next day, they enjoyed recognizing incidents they had been reading of or discussing. One student, Kaaren Robinson, age fifteen, wrote the following as part of a review published in the *Blair Street Freedom Bugle*:

It portrayed the brutal transportation of the Negro from his native Africa to a new country, the inhuman treatment upon his arrival, the confusing position of the political-minded white man with regard to his stand on the slave question and the continuous struggle of the Negro against overwhelming odds.

... Because of his up-bringing, the new freedom put the Negro in a confusing state which naturally led him back into another kind of slavery. This slavery has lasted until now.

The author achieved these points through narration and conversation. Through this medium the Negro of today can better understand why the white man feels as he does toward him. However, this does not justify his feelings nor his actions. *In White America* is a great and moving drama which should be seen by black and white alike.

Though questioned, Kaaren resisted any attempt to enlarge upon the play's effect. From her point of view, the play allowed her to understand the white man's confusion; it told her nothing about the Negro she did not already know.

Charles Cobb, a student at Howard University before he joined the SNCC staff, was responsible late in 1963 for suggesting the idea of Freedom Schools. He has written cogently of their *raison d'être*, in a piece called "This is the Situation":

Repression is the law; oppression, a way of life—regimented by the judicial and executive branches of the state government, rigidly enforced by state police machinery, with veering from the path of "our way of life" not tolerated at all. Here, an idea of your own is a subversion that must be squelched; for each bit of intellectual initiative represents the threat of a probe into the why of denial. Learning here means only learning to stay in your place. Your place is to be satisfied—a "good nigger."

They have learned the learning necessary for immediate survival: that silence is safest, so volunteer nothing; that the teacher is the state, and tell them only what they want to hear; that the law and learning are white man's law and learning.

There is hope and there is dissatisfaction—feebly articulated—both born out of the desperation of needed alternatives not given. This is the generation that has silently made the vow of no more raped mothers—no more castrated fathers; that looks for an alternative to a lifetime of bent, burnt, and broken backs, minds, and souls. There creativity must be molded from the rhythm of a muttered "white son-of-a-bitch"; from the roar of a hunger bloated belly; and from the stench of rain and mud washed shacks.

There is the waiting, not to be taught, but to be, to reach out and meet and join together, and to change. The tiredness of being told it must be, "cause that's white folks' business," must be met with the insistence that it's their business. They know that anyway. It's because their parents didn't make it their business that they're being so systematically destroyed. What they must see is the link between a rotting shack and a rotting America.

The Citizenship Curriculum, the discussion of which filled most of our mornings, is frankly a response to the repressive society Charles Cobb has described. It is aimed at meeting two basic needs of students: first, a need for information; second, a need for identity and hence activity. The "facts" of history; in terms of dates, people's names, places, events, as well as the interpretations of history—all this has been denied to them, and denied particularly in relation to their own situation as American Negroes. Not only is Negro history unknown to them, but even the history of the current Negro revolution is known only in bits and pieces, largely through television, since their newspapers are notoriously uninformative. The second need, the need for identity and activity, is organically one with the need for facts. It has to do with what happens when an individual begins to know himself as part of history, with a past and a potential future as well as a present. What happens when an individual begins to assess himself as a human being? The aim of the Citizenship Curriculum here is to assist the growth of self-respect, through self-awareness, both of which lead to self-help. In this way, the curriculum at the center of the Freedom Schools is frankly and avowedly a program for leadership development.

In many different ways, the mimeographed curriculum makes clear the

Freedom Schools' purpose: "to provide an educational experience for students which will make it possible for them to challenge the myths of our society, to perceive more clearly its realities, and to find alternatives, and ultimately, new directions for action." Or more briefly, "to train people to be active agents in bringing about social change." The curriculum itself, however, declares that "It is not our purpose to impose a particular set of conclusions. Our purpose is to encourage the asking of questions, and hope that society can be improved."

Because the chief tool is the question, the curriculum is hopefully "developmental," that is, one that "begins on the level of the students' everyday lives and those things in their environment that they have either already experienced or can readily perceive, and builds up to a more realistic perception of American society, themselves, the conditions of their oppression, and alternatives offered by the Freedom Movement." The seven units are as follows:

1. Comparison of students' reality with others (the way the students live and the way others live)
2. North to Freedom? (The negro in the north)
3. Examining the apparent reality (the "better lives" that whites live)
4. Introducing the power structure
5. The poor negro and the poor white
6. Material things versus soul things
7. The Movement

In addition, two sets of questions are to be constantly in the minds of the teachers and frequently introduced to the students:

The Basic Set of Questions:

1. Why are we (teachers and students) in Freedom Schools?
2. What is the Freedom Movement?
3. What alternatives does the Freedom Movement offer us?

The Secondary Set of Questions:

1. What does the majority culture have that we want?
2. What does the majority culture have that we don't want?
3. What do we have that we want to keep?

Some of my own experience was with a relatively young group—eleven to fourteen-years-olds. After describing their own houses, they went on to describe the houses of whites in Jackson that they had seen, either because they had themselves worked as domestics, or because their mothers did. When asked what changes they would like made in their own houses, while their answers varied from additional rooms to more yard space, no one thought in

terms as grandiose as the "white" houses they had described, and most of them thought of their houses as "comfortable." On the other hand, they were certain that their (segregated) schools were inferior, even when they admitted that the buildings were new. They resented their hand-me-down textbooks, they suspected the inadequacy of their teachers, and they complained particularly bitterly about the repressive atmosphere. In their schools, they reported that no questioning or discussion was allowed, except in rare instances when they and a particular teacher knew they were "taking a chance." Of course, they knew little or nothing of conditions in white schools, either in Mississippi or elsewhere, beyond their impression that these, somehow, were "better."

High school juniors and seniors were especially interested in the subject of going north to freedom. On the one hand, many of them expressed a wish to go north to college, in part because they suspected that Negro colleges in Mississippi were as inadequate as their public schools, but also because they wanted the experience of learning in an integrated group. They were articulate about the need for communication between black and white. The freedom songs they sang each day—"Black and white together/ We shall overcome," for example—were not simply words to be mouthed. On the other hand, some of them had been reading with us from the works of Richard Wright and James Baldwin of the Negro in Chicago or Harlem; and they knew they were living through a summer which had brought riots to northern cities, though not to Jackson, Mississippi. They questioned the condition of Negroes everywhere, and many of them concluded that it was probably better to stay in Mississippi and work to improve things there than to imagine that things were better in another place.

The Freedom School curriculum's most substantial statement about values, "Material Things and Soul Things," takes as its central idea the society that is "humane" because it is "nonviolent." Negroes, of course, are no more naturally violent or nonviolent than any other group. But these students, brought up on the edge of a volcano, named as their heroes Martin Luther King and Medgar Evers, and, when they knew of him, Gandhi as well. At Blair Street, I asked the question about heroes because Paul Lauter had reported that when he asked the question at Freedom Schools throughout the state, those very three names occurred. It was also Paul's impression that as SNCC people became veterans at their jobs, nonviolence for them became not strategic manner but genuine conviction. For the veteran SNCC worker, Matt Suarez, who dropped in one afternoon at Blair Street for a visit and stayed for a discussion, nonviolence had become essential to life. Some of the students who listened to him had also experienced organized demonstrations within the discipline of the nonviolent movement. But their minds

were far from decided. They questioned the theory; they suspected themselves of "violent feelings"; they talked about "strategy"; they asked for a "speaker"—and got more discussion!

Because the student needs to learn not only about the world he lives in, but also how to be free enough to live in it, the chief tool of Freedom Schools always was discussion. Ideally, discussion began with the question, "How do you feel about . . . ?" or "How would you feel if . . . ?" and moved on to questions about motivation ("Why do you feel this way?" or "Why would anyone feel this way?"). Once the discussion had begun, the questions could move on to students' reactions to each other's ideas. At first, of course, students were distrustful of the situation generally. Some were also shy before their peers as well as frightened of their teacher. But of course they all had feelings and they all had some words with which to describe them. And eventually the moment came, unnoticed and passed over, when a student could say easily to his (white) teacher or to a fellow student, "I disagree," and explain why.

The teacher's main problem was to learn to keep quiet, to learn how to listen and to question creatively rather than to talk at the students. He had to discard whatever formal classroom procedures he had ever learned and respond with feeling and imagination as well as with intelligence and good humor to the moods and needs of the group. Above all, the students challenged his honesty: he could not sidestep unpleasantness; he could not afford to miss any opportunity for discussing differences.

I have no crystal ball, but I can submit two aspects of my own experience that suggest that the Freedom Schools of '64 spread more than transitory ripples in a huge Mississippi sea. The first was a discussion that led directly to social action independently instigated by the students themselves. The second was an experiment that led directly to the students writing poetry.

The third week of Freedom Schools in Jackson was also the week of school registration for those Negro first-graders who were to attend previously white schools. Registration was scheduled for early Thursday morning; a mass meeting for interested parents had been called by thirty-six Negro ministers of Jackson for Tuesday night. This was Monday morning, and the group at the Blair Street School had begun, for some reason, to talk about the "myth" of Negro inferiority. At one point, when there was silence, I asked how many of the twenty students present (ages fourteen to twenty) knew some first-grader who was about to start school. Everyone did. Did anyone know any who were going to a white school? No one did. When I asked why, I got many different responses:

My sister thinks her son would be unhappy with white children.

My brother hasn't gone to kindergarten.

The white school is too far away.

My mother wants my brother to be with his friends.

My father says he doesn't like the idea.

None of the students had mentioned the word fear. They all looked uncomfortable and I felt my anger rise: "What am I going to say to my friends back North when they ask me why Negro mothers haven't registered their children in white schools? That they like things the way they are?" I could see the consternation on the face of Gene Gogol, my fellow teacher, who began, "I disagree, Florence, you just don't understand the situation." I felt that his rebuke was probably a just one, but then the students began to smile wryly and, one by one, they began to talk of the various fears that "perhaps" these parents were feeling. Personal safety. Economic security—the loss of jobs because they weren't being "good niggers." Failure in the white school—either because of social ostracism or because of poor training and possibly the alleged intellectual inferiority. But then suddenly, I don't know exactly what shifted the discussion, perhaps something about the white faces that Gene and I wore in the midst of the black ones, suddenly the students were talking about *positive* reasons for sending children into integrated schools. Then one of the sixteen-year-old girls suggested that perhaps we—meaning those of us in the discussion group—ought to go out into the neighborhood and talk with parents who were reluctant to send their children to white schools, that perhaps we were most suited for this job since we knew the value of good education and we knew there was really nothing to fear. When I suggested that we try one of the school's favorite procedures, role-playing, there were volunteers immediately for mother, father, child, and for two visitors from the Freedom School. The players were evenly matched so that the play-discussion rehearsed all the arguments we had heard. The role-playing father remained essentially unconvinced, but his wife assured the visitors that she had really changed her mind and that, after they had gone, she would "work on" her husband.

Gene and a crew of student-volunteers worked all the rest of Monday, Monday night, and all of Tuesday. They talked to more than seventy families and received from twenty-seven of these assurances that at least the mother would attend Tuesday night's mass meeting, perhaps would take advantage of the transportation we would provide. Disappointingly, only one mother kept her promise. But on Wednesday morning, Gene and some students began their visits again, and by Thursday noon, all of Blair Street's Freedom School were boasting that eleven of the forty-three Negro children in Jackson who actually registered to attend previously white schools had done so as a direct result of Gene's and the students' talks with parents.

Thus the students had direct evidence that their school experience had led

them to create something that was lasting and profound. Additional evidence—this of a more personal nature—followed their reading and discussion of poetry.

We had begun with poems by Langston Hughes. They knew immediately that when Hughes, in a poem called "As I Grew Older," mentioned a "thick wall" and a "shadow" growing between him and his childhood "dream," he was talking about walls and shadows they knew everyday in Jackson: the barbed wire around the parks, for example, or the hate in white men's faces when they tried to go to a movie downtown. I didn't need to be a teacher showing the difference between literal meaning and what was "symbolized." There *was* curiosity about forms. Do all poems rhyme? What is rhyme, anyway? Can poets use any words they like? The students, who had never heard of Langston Hughes, were surprised by his slang, by his use of jazz expressions. They listened to the occasional irregularity that made rhythms interesting, especially in a Hughes song-poem like "The Weary Blues"—which they never tired of.

One day, when discussion had flagged, I suggested a "game." Let's divide into four groups of five and try writing a "group" poem. I even offered a subject: try writing about yourselves and Jackson—we had just been reading about Hughes and Harlem. When I returned, half an hour later, cries of "Listen to this" greeted me. With one exception, the poems were not group products—the groups had stayed to watch individual members create. The best poem came from a sixteen year old girl, a visitor to Jackson from Pascagoula, who had just come for the first time to Freedom School, and who was to continue attending thenceforth. This is Alice Jackson's poem called "Mine":

I want to walk the streets of a town,
Turn into any restaurant and sit down,
And be served the food of my choice,
And not be met by a hostile voice.
I want to live in the best hotel for a week,
Or go for a swim at a public beach.
I want to go to the best university
And not be met with violence or uncertainty.
I want the things my ancestors
Thought we'd never have.
They are mine as a Negro, an American;
I shall have them or be dead.

In the days that followed, we read poems by Sandburg and Frost, two poets the students had heard of, but the greatest excitement came from their introduction to e e cummings, especially to the poem "Anyone Lived in a

Pretty How Town." One day, after two hours of a discussion of cummings' poems, I asked the eight or nine students present—ages fourteen to seventeen—whether they wanted to try writing again. When I asked whether they wanted a suggested subject, I heard an overwhelming series of no's. No subject . . . let us write what we feel like writing.

Within twenty minutes, Shirley Ballard, age seventeen, was reading aloud to me a poem called "Time." She read it slowly, emphasizing the individuality of certain words and phrases. Its feeling was clearly fragmentary. But then she showed me the page on which she had written the poem: four long lines, resembling her reading not at all. She had read it in a manner that suggested something else, and I showed her cummings' page. She caught on instantly, took her page, and returned in several minutes with the following version:

Time goes by so slowly
my mind reacts so lowly
 how faint
how moody
 I feel,
 I love not
 I care not.
Don't love me.
Let me live.
 Die
 Cry
 Sigh
All alone
 Maybe someday I'll go home.

Another seventeen year old, Sandra Ann Harris, quickly produced a cummings-like poem—even to the elimination of all capitalization:

why did i my don'ts
why did i my dids
what's my didn'ts' purpose
is it to fulfill my dids

what isn'ts have i proclaimed
what ises have i pronounced
why can't i do my doings
my couldn'ts do renounce

my wouldn'ts are excuses
my couldn'ts couldn't be helped

my weren'ts were all willful
my words of little help

the haven'ts were just there
my didn'ts did believe
that all my won'ts are daring
my wills to receive

If it is startling to consider how much these students learned so quickly, it is also instructive to consider that in Freedom Schools all over Mississippi this summer students were becoming both social activists and poets. An impressive volume of poetry (which may soon be published) appeared in Freedom School newspapers. And a Mississippi Student Union has been formed. The connection between poetry and politics should surprise no one who has read the Romantics or, more recently, the poets of the Irish Renaissance. What is surprising is that, in some ways, it took *so little* to accomplish so much in the Mississippi Freedom Schools.

Consider the discussion circle, the union of teachers and students in a status-free ring. Consider too the position of these students—blacks in a white culture—as outsiders who were now, in 1964, *conscious* outsiders, youngsters seeing new possibilities ahead of them and, at the same time, young adults with the wisdom to see what Negro slavery has been. Under these special new conditions, one could talk and think about what it was like to be a slave and what it might be like to be free. One could even try *being* free. Under these special conditions—the consciousness of being suppressed combined with the proffered opportunity to base education on that consciousness—creativity was the natural response.

What have we to learn from Freedom Schools? The politics of education. That our schools are political grounds in which our students begin to learn about society's rules. That, therefore, if we wish to alter our students and our society, we must alter our schools. That if we would have strong and creative minds we must remove chains both from bodies and spirits. That we as adults and educators have to listen and respond rather than preach. That we need to share with our students a sense of being open to what each uniquely experienced companion can reveal. That this perspective of equality is itself a revolution that goes far beyond the surface movement of Negroes into white society. And that if Freedom School teachers in Mississippi society know themselves as unwelcome and harassed outsiders, not unlike the Negro students, then authentic teachers anywhere must face a similar knowledge.

The Freedom School students and teachers who heard Langston Hughes' "As I Grew Older" understood that Hughes' prayer was theirs too—for

strength and wisdom to break through all spiritual prisons of self and society
and so to reach freedom:

My hands!
My dark hands!
Break through the wall!
Find my dream!
Help me to shatter this darkness,
To smash this night,
To break this shadow
Into a thousand lights of sun,
Into a thousand whirling dreams
Of sun!

*A sociologist examines the pressures and assumptions
that make ubiquitous the use of time as the unit
of academic credit in American higher education.*

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The Class-Hour Economy

Higher education is an industry. It has become industrialized especially in this sense: its work has been taken over by organizations engaging in large-scale production, in contrast to a system of individual craftsmen.

But education does not produce material goods, or at least that is not its direct result. It must therefore be classified as a service industry—like the medical profession, the postal service, or the insurance business.

Like all industries, education is directed to a kind of market. "Market" is here used in its broadest sense to indicate a system of exchange where goods or services are given, for a price, to their beneficiaries. The price paid need not always be a monetary matter. In the case of education somehow money is obtained to pay for the service; but the price paid in a student's study and self-discipline is probably of greater importance to him than the money *someone* puts up.

We begin, then, with the perspective of education as an industry—a service industry, to be more exact—whose service product gets distributed in a system which is at least analagous to a market system.

But let us beware of putting education into too tight a conceptual mold. It may be like other industries in important general respects, but it also has its differences. And as a service industry there are some distinctive peculiarities of education. Let us note three of these peculiarities which loom especially large for education.¹

¹ Perhaps it should be acknowledged that the mental hospital has most of these peculiarities, too. Indeed, such re-educative institutions have more in common with educational in-

First, it is exceedingly difficult to measure the service functions in education. It is not always possible even to tell when a person is really being given educational service. The assumption that a student is always serviced when he is being educationally processed is typically made by faculties, but a closer look must cast doubts on this assumption. Furthermore, assuming there is effective service rendered, it does not naturally fall into easily measurable units. There are not so many letters delivered, so many tonsils removed, so many dollars worth of insurance extended, or so many parts of a broken-down machine repaired. True, there are so many hours taught; and in service industries the amount of time in which service is rendered tends to become the unit of service when other units fail to impress themselves. But there is a real question whether or not the more important qualities of educational service are very closely correlated with the number of hours a student is processed through classrooms.²

In the second place, education is peculiar in its stubborn adherence to the ideal of personal service within the reality of a mass distribution system. The peculiar thing here is not the idea of personal service itself, nor the reality of a mass-distributed service, but the combination of the two. Most service industries actually treat one individual case at a time to a larger extent than does education (a doctor sees one patient at a time, one insurance client is served at a time, one automobile is serviced at a time—while educational service is performed for “classes” at a time); yet perhaps no other service industry talks so much about servicing the unique individual. This discrepancy between the ideal of personal attention and the reality of processing by classes makes educational institutions especially tempted to treat their units of mass processing (such as class hours) as their unit of educational service for the individual.

A third peculiarity of education as a service industry is the specific recognition that service is performed for society as well as for the individual student. Indeed, most of the cost, financially speaking, is paid by persons or organizations other than the student. And the standards of service must reflect this wider obligation as well as the obligation to the student. In fact, the individual student sometimes may not even want the service. He may be

stitutions than may sometimes be realized. This writer, for example, has been greatly stimulated in this analysis by Erving Goffman's *Asylums* (New York: Doubleday Anchor books, 1961).

² Another peculiarity of higher education, which would not be shared by most forms of education, is the combination of the functions of production and distribution. While professors are distributors of educational service locally, they are also frequently producers for the national or world-wide knowledge industry of their particular discipline. The fact that their scholarly “productivity” bears more tangible fruits than their service to students adds further complications to measuring their services rendered as educators.

trapped into it "for his own good" by parents, by state law, or by the requirements of his major field or of the institution. Under these conditions, the criteria for judging the service rendered can hardly be left to the discretion of the student. He isn't always expected to know what his educational needs are or how effectively they are being serviced. The educational profession thus assumes much of this responsibility for judging the educational service rendered by itself, and it assumes this responsibility both on behalf of the interests of the students and on behalf of the interests of society.

One result of these peculiarities of the educational service industry is to lessen (compared to other service relationships) the initiative and responsibility of the student on behalf of his own servicing. In this industry there is never the assumption that "the customer is always right." Teachers who feel the strain of student pressures might consider sometimes how much more powerful is their position with student clients than is the case for the typical "servant" (service distributor). A student is given little power to control the service relationship; perhaps the most he can do is to disrupt it—which is indeed frequently his answer on educational levels where the student has little appreciation of the service rendered him.

But what individual students lack in power to define the teacher's service function is sometimes made up for by their weight of numbers. In the classroom the teacher is alone; students are not so rare. Insofar as the student majority can be used to influence the service relationship (and not to disrupt it), its influence is usually directed toward standards of democratic justice. Students want "equal justice under law"—an equal chance to partake of the service rendered, a clear definition of their own responsibilities in obtaining service (these responsibilities to be simplified as much as possible), and some clear bench marks for measuring service obtained.

For the teacher's side there are influences leading to a similar result. Because the teacher typically services a large number of students at the same time, there is a strong motive for some means of standardization in scheduling and measuring the service rendered.

So we see a convergence of interests of both students and teachers toward a routinization of their service relationship. The lecture system of higher education, with its correlated credit and grading systems, seems to fill the bill very well.

Earlier it was noted that service industries achieve distribution through some kind of market. Now we are in a better position to see what kind of a market this usually is for higher education. The service market in education is much less monetized than is the case for most service industries. We have seen, however, that there is pressure from both sides of the market to bring regularity and measurability into the distribution of education. The

result is a market of carefully measured status. The student buys educational status in quantities of credit hours and grade points. He pays for it partly through money, but pre-eminently by attending class and doing what he is there told to do. What he is there told to do is to read some of the books his teacher finds interesting, remember some facts and relationships that his teacher considers important, and if possible to show some creative intelligence in thinking about these things. For this training of the mind, if pursued with resolution and patience, the student gradually collects enough educational counters to be able to cash them in for a degree.

The server's side of the market has a slightly different focus. Teachers tend to think of themselves as dispensers of knowledge rather than status, and they often resent the attention that students pay to credits and grades. It is often disappointing for the teacher to realize that most students cannot see his subject as an exciting adventure in learning; still, there they are, and they are willing to try to learn something. So the teacher gives what he can. He does not experience the transaction primarily in terms of units of status. It is true that his right to appear as a teacher is a result of laboriously earned status, and this status may be passed on in small measure to his students. But primarily it is himself that he gives—himself and his full mental facilities. This is an exceedingly difficult kind of service to measure and so, for want of a better or more natural unit, it becomes measured by hours.

The credit hour system thus results as a natural convergence in the needs of students and teachers. It provides a unit for measuring the service given in teacher output, and also for measuring the units of educational status taken on by the student. And it makes for an especially neat package to assume that the costs to teachers of their services and the value to students of their learning both alike increase in direct proportion to the number of hours spent in the classroom.

From the author's distinction between a school and a publicly supported center for research and development flows a principle to clarify the current ambiguous debate on the American university.

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Are Our Universities Schools?

In surveying the noisy debate over higher educational strategy with which we are currently preoccupied, a careful observer can hardly escape the feeling that no real progress is being made. In spite of its scope and distinguished participants the results of the debate appear to form no pattern of the sort from which thoughtful planning can issue. Growth and (as a consequence) change are facts. But the strange impasse which marks our efforts in the face of these phenomena, in the midst of vigorous discussion, suggest that some fundamental distinction has not been grasped with a clarity sufficient for the productive ordering of our critiques and proposals. Such is, I believe, the case; in this paper I shall attempt to delineate the missing distinction which seems at least in part to negate our attempted solutions.

There have been fundamental changes in our society in the past century which have caused a new, historically unique intellectual institution to come into existence—the publicly maintained center for general and applied research and development. So gradually and unobtrusively has it come from the womb, that we have been able to recognize its existence only negatively, in its effects, and particularly in the nearly fatal ambiguity which has been introduced into its academic birthplace. As a consequence of the birth of this New Institution, something is “wrong.” But our “solutions” will be only transient or rhetorical until the existence of this New Institution is accepted as a primary principle of distinction, and is then consciously employed in alleviating our complex academic problems. Until it is so recognized, our

analyses as well as our suggested improvements are doomed to work at cross purposes.

The most significant fact about this New Institution, for our present purposes, is that its aim is not to be a school at all, at least in the traditional sense, but is rather, in large part, to solve the problems assigned to it by various agencies of our society and our nation, such as government, business, and particular professions. Our error has been to confuse radically the nature, criteria, and purposes of this New Institution with those of its matrix, the traditional school, and *vice versa*. The result of this mistake has been to becloud the question of whether we wish to continue the original institution at all, and to make it nearly impossible to develop sets of intelligent criteria which will apply precisely and fruitfully to each as a distinct institution. Because of the ambiguity inherent in our falsely unified category, we have faulted each for the other's mistakes and laid expectations upon the one which could be fulfilled only by the other. Slipping uncritically from one framework of analysis and discussion to the other, we have made productive judgment virtually impossible.¹

THE NEW INSTITUTION

The roots of our confusion lie in history and sociology. Our customary institutional categories, such as family, state, and of course the school, have necessarily shaped our thinking; but in this case our uncritical acceptance of them has limited our ability to discern a fundamentally new situation.

The demands of our modern, revolutionary culture have forced a new intellectual institution into existence; but, since it has no exact historic parallel, it has been very difficult to recognize. It has consequently been nearly impossible for us to judge and criticize it, and hence to shape its growth and development. This New Institution is, as we have said, a new "intellectual" institution, but it is *sui generis*. It is a public center devoted primarily to research, analysis, and to some extent, specialized training.

From this very loose preliminary definition a number of crucial subsidiary distinctions follow. The school, then, is no longer the only intellectual institution in our culture, nor is the only intellectual vocation that of the traditional scholar-teacher. What has confused us is the fact that the New Institution is *like* the school. But, "like" is not, of course, "the same." It is like the school only insofar as its work is largely intellectual. Further confusion stems

¹ Since writing this, my attention has been drawn to a particularly forceful presentation of the effects of this failure, together with an even less optimistic prognosis. A superb critique, drawn from an address by Jacques Barzun, was published under the title "The liberal arts tradition is dead or dying . . ." in *The Intercollegian* of March, 1964.

from the fact that the New Institution is also *like* a commercial institution in that it has certain limited tasks to accomplish, certain assigned problems to solve. Its potential range is, however, far broader and not specified by restricted motives. The source of its unique nature and purpose is the fact that the scientific-industrial revolution has made it impossible for a nation to survive without the services of publicly maintained centers of thought, research, and intellectual *praxis* as focal points and resource-centers for certain kinds of decisions. Because of the "partnership" approach to social problems, these New Institutions logically have come to be publicly organized but privately subsidized and utilized.

This New Institution has no exact historical parallel and it needs none. What it does need is not to be confused with anything but itself, to be free from judgments based upon an attractive, but entirely erroneous, simile relating to an accident of its birth. The problem is that this generically new intellectual institution has grown up in the shell of the traditional academic structure. Having now reached a kind of early maturity, as an independently viable organism, separation from this shell is required or we risk the danger of destroying both. For the New Institution to continue to be garbed in an academic frock is anomalous to say the least. The whole business is as unnecessary and ridiculous as it would be to suppose that towns which grew up around ancient abbeys or cathedrals ought to have deans or abbots as their principal officials, or that their public servants ought to wear cassocks.

The fact that we have not noticed with sufficient clarity this New Institution's growing up in and through the traditional academic form has introduced the ambiguity into the debate over the contemporary academic institution. Recognizing the true situation (that we have been discussing not one institution but two) will serve both to make understandable many of the problems that have caused us so much trouble and provide a basis for genuinely effective thought about both. Perhaps most important of all, its use can save us from entirely losing sight of the other critically important intellectual institution, the school or educational community.

We have gone, of course, some way toward employing our distinction. On the positive side, institutions like the National Institute of Health or the Los Alamos community represent certain, very rudimentary examples of this new kind of institution, but they are far too limited in their conception to satisfy the larger public need. Likewise, perceptive critics of American higher learning, specifically, men such as Robert Hutchins and Jaques Barzun, have drawn our attention to the negative force of a developing technology on American educational life. But their solutions have not pleased us. Thinkers of otherwise indubitable perspicacity, like Veblen for example, struggled continually (and needlessly) either to deny legitimacy to one function or the

other, or to force one or the other function into that institutional model they thought superior. We have rightly if ignorantly resisted their insistence on our choosing which we *preferred*. On a sounder analysis no such Hobson's choice is required.

We must also recognize the obvious fact that the modern "university" cannot be salvaged by rhetorical devices. It is not a "multiversity" or anything else of the sort: It is not a university at all, in the traditional sense; and it does us no good at all to define it by an educationally bowdlerized label. The modern "university" does not even bear a genuine likeness to the traditional one. Its only common bond is that of employing some of the traditional terms, ideals, and organizational schemata, and the possession of a thoroughly corrupted version of its long-standing (but still socially necessary) educative function. It is simply no longer principally a school. Furthermore, I judge that it no longer "should" be, *provided* we recognize that now that the child has come to overshadow the parent, we are left virtually bereft of adequate educational institutions at the highest level, and *provided* that we proceed at once to rectify this situation. Our persistence in trying to exemplify whatever symbolic bonds remain can only be fatally harmful to both. The cord must be cut, though this is not meant to imply that the association of the two intellectual communities is either unprofitable or impossible. It means only that the confusion of the two communities will do justice to neither.

Historically, we might have seen the present dilemma as implicit in the Morrill Acts and the rise of the "land-grant" colleges. Understandably, our mistake was to assume too uncritically that we were merely adding a new *dimension* to higher educational responsibility, as the apology so often runs, when we were in fact posing a solution for a new demand in our culture: sophisticated public intellectual direction in areas which far transcended the capacity of educational institutions. Since, in the beginning, the demand was seen and interpreted minimally, we could carry on for a while on the basis of the "new dimension" approach. But the subsequent proliferation of demands has increasingly forced us to see that a new idea, a wholly new kind of institution, was really involved. That such an institution, lacking in historic parallels, went unrecognized need not cause us undue chagrin, unless of course, we should persist in failing to take cognizance of it.

The development implicit in the "land-grant" colleges actually preceded the German university "ideal" which was later appropriated as an apology for the research complex by then coming on strongly. Doubtless the "German ideal" was sometimes stressed for its own virtues, but probably it was a justification of the new "educational" apparatus as well. To equate what we are now doing, however, with the "German ideal" would be a bit silly, even if it were not already directly harmful. In spite of the emotional exhortations

of the Flexners and the Harpers, we no longer have it, though we may have preserved some of its worst anachronisms, captivity to national ends, rigid specialization, and so on. In any case, our enormously over-developed academic complexes should no longer be justified or analyzed after this model, if, indeed, they ever should have been.

The point is, simply, that the functions, and the criteria, of these New Institutions are no longer educative ones. That is, they are not chiefly concerned with providing a critically maintained intellectual tradition, and the basic skills necessary for employing it, and effectively placing these at the disposal of our citizenry. The immediate practical problem, then, comes down to this: We must choose whether we wish to turn the present "university" entirely into the New Institution, without cramping it by any educative mold, and then build anew along properly educational lines; or whether we wish to restore strictly educational functions to our present centers of higher learning and build the New Institution separately.

PROBLEMS PRECIPITATED BY THE NEW INSTITUTION

It will be useful now to examine briefly a few of the specific problems which have arisen from the birth of the New Institution within the traditional one. This examination should also help make clearer the distinction which we have been trying to develop.

First of all, we shall examine the effect of our distinction upon the problems of size and the respective roles of government and business. It has been understandably profitless to compare sizes, and the advantages of size, between instances which have not in fact been comparable, which are not even generally similar—as would be the case in discussing the function and merits of size at, say, Dartmouth and the University of California. Or, it is obvious that we are ill-advised to debate the effect of government aid at M.I.T. and Ripon College as if those effects were even capable of comparison, let alone quite the same. One is a traditional college, the other is our current hybrid: The New-Institution-*cum*-educational-appendage. To attempt to compare them is merely to compound the confusion. For example, private or governmental capital invested on a necessarily elaborate scientific apparatus or a program of research at Berkeley will not be likely to induce either a conservative or a socialistic bias in its freshmen. On the other hand, an imprecise distinction will probably fail to suggest the real force that enormous subsidization can have in pushing a purportedly *educational* institution into research and development which is biased, *educationally* speaking. The sort of subsidization which we now encourage assuredly does give undue weight and prestige to certain kinds of questions, questions which are raised and selected

for consideration in accordance with an essentially *non*-educational principle. Indeed, all the queries about productivity or educational effectiveness become hopelessly entangled when put isomorphically to the entire range of American higher "education," from our vast "universities" to our humble community "colleges."²

Next, we must turn our attention to some internal problems. Take first the case of that benighted "central figure" in the academic world, the professor. We have worried with him of late over his status. But, as a matter of fact, a conflict which touches his very identity has followed from our confusion of the two institutions. Frequently—indeed, nearly always—he has been educated as a teacher, that is, in the traditional pattern. Should he attempt to remain such, an unlikely possibility if he has any "get-up-and-go," we say, he will be at least partially corrupted, for the criteria utilized in advancing him (or retaining him at all) will be those drawn from the New Institution. He will be required to be a "productive scholar," but "productive" will be interpreted almost exclusively as "advancing" knowledge in a particular mode whose relevance is stipulated usually from a particular problem-centered viewpoint. If he desires the *superadditum*, the "real" prestige, it will be his solely through engaging "useful," that is, publicly relevant, questions, now more and more assigned to him by government and industry directly. (The staggering growth and peculiar force of such prestige is in itself a powerful testimony to the validity of this analysis.) Now, if the professor cannot do this, possibly because his particular expertise does not lend itself to such immediate employment, he will probably attempt something much worse: By a flurry of activity and trivial writing, he will try to look as if he can be so valued. Our "learned journals" and our Sunday editions are already groaning with attempts to appear valuable, attempts which would profit by a bit of leisurely steeping. One might be inclined to be angry were it not for the fact that the annual summary of the department's "productivity" haunts the road ahead for so many of these folk.

We have also wondered why the professor's allegiance (so necessary to an educational community) is less and less to his alma mater and more and more, say, to the American Chemical Society, the Department of Defense, or the DuPont Corporation. The answer is obvious. Furthermore, for the new model practitioner, teaching often becomes merely a way of gaining and employing

² This raises one point which must be kept clearly in mind both here and throughout the balance of this paper: My aim is not to defend the "good" humanistic, liberal-arts tradition from absorption by the "bad" scientifically-oriented "multiversity," "megaversity," or whatever one wishes to call it. Of course, the debate has become so blindly acrimonious that it will be almost impossible for that disclaimer to be accepted. Each side will doubtless see me as a captive of the other. The all-important consideration is that both will suffer without need or profit if this distinction is not carefully made.

neophytes for the New Institution rather than a compelling vocation for educating in its own right. Genuine scholars have no time for it (if they are "really" productive) or no inclination for it, since their heady, if inflated, status depends upon satisfying misapplied criteria uncritically borrowed from those which ought to characterize the New Institution. Yet, the fact remains that teachers—genuine, full-time teachers, whose research is for the purpose of enlivening their teaching and not necessarily solving problems posed by others—are an absolute necessity in an educational institution. Their status would also be high if their vocation could be kept properly distinct and if it were not judged by terms drawn unconsciously from the wrong conceptual framework.

By the same token, the prestige disciplines are of necessity those whose honor is primarily externally derived. As was the case with the professor, comparisons are particularly odious when they are unconsciously shifted from one universe of discourse to another. So long as we retain our confusion between the "New Institution" and an institution dedicated to education, we cannot justify Latin and English Literature without at least a trace of embarrassment, particularly with the general public. The public's lack of distinct criteria, which makes it almost impossible for them to accord true status to the teacher, also makes it difficult for them to accept programs which "waste time" instead of getting the job done. In fact, it becomes exceedingly difficult to rule any disciplinary area in or out of the institution's proper sphere of responsibility with a clear conscience. Our frame of reference for defining both prestige and utility shifts between a rather narrow, present centered practicality and general education; thus any subject can be made to appear either wise or foolish: Latin doesn't "help" Chemistry; Chemistry does not give "broad" education by itself. Where there is no stable principle of exclusion, argument can hardly proceed. One of the results of this dilemma is that the "university" operates most clearly like an educational institution in the "unproductive" fields such as Literature and Philosophy. But, in these areas there is the problem that the general prestige of these pursuits declines as a whole; and, because of the mixed judgments which are necessarily made, there is little opportunity to raise the stock of such fields with the layman.

It might be inferred from the preceding observations that what is proposed is that the New Institution be given responsibility for the Sciences and that the traditional institution keep the Arts. Nothing could be further from the case. Just what the New Institution will embrace needs no artificial distinctions such as liberal, artistic, valuational, or the like. Its tasks do not arise from trying to form men or convey a broad tradition, but from solving problems which face the culture, in fact or in theory. We can clearly see that the New Institution would embrace all the natural, social and behavioral sciences,

and technological problems as well. What such institutions could or would accomplish, even in areas previously restricted to an exclusively academic arts approach, is something about which we can only speculate for the present. The traditional educational institution clearly would retain science, but as an activity qualified by *educative* criteria. How scientists think and function, what they have thought and discovered, as it shapes men and societies, is naturally to be included. The school, however, is not a place for the practice of science in the full sense of that word, anymore than it is the appropriate *locus* for the practice of drama as a vocation. It cannot be. The fact that most schools now physically resemble great factories or industrial research facilities is as anomalous as the fact that a few years ago technological machinery had to be hidden behind ivy-covered Gothic walls. Form has followed function; but that is a sounder canon for architecture than it is for education. It is no more preferable that industrial plant design or organization should coerce the natural and essentially communal life of an educational institution than that research centers should have stained glass windows and faculty clubs.

Our being fooled into thinking that the contemporary "university" has education as its chief purpose has also led us to assume that quality education could only take place in such institutions. This assumption has cost the "small colleges" dearly; it may even have cost us their invaluable contribution. We have looked at our educationally deceiving monsters and said, "Now that's the place where people really get a schooling. Count up the advantages in terms of men, machines; books, etc." By comparison with Michigan and Cal. Tech., Williams and Lawrence can look anemic indeed—but only when the proper criteria are misapplied. The educative function of the large university has declined shockingly, as anyone who has faced a bored graduate instructor or stared into flickering closed-circuit telecast can testify. Why argue about it? The small college, provided that it is alive to its proper function, can educate and can educate very well indeed. What it cannot do is compete as a center for public intellectual practice.

The point is, of course, that both institutions are desperately needed; confused imitations of either will be fatal. Community, identity, purpose, these are virtues in educational institutions. They may have some application to the new model intellectual center also, but they will be defined in quite different ways. Skilled teachers, alive to ideas and issues, can prepare people for taking their place in research, or in other walks of life; they cannot be this, nor can they do more than equip (with a "prayer," if you will, that the spirit also catches) for the intelligent and continually educative life that should lie ahead for any human being. And, they surely cannot make this invaluable contribution if their very existence is jeopardized by their lack of research contracts or the absence of large scale computers from their properly

peaceful environs. Most of us persist in so faulting them, in spite of the fact that it has not yet been demonstrated that machines make education. Before we consign our structure of genuinely educational institutions to oblivion, and concentrate on doubling and redoubling our present amorphous institutions, we ought to understand what we are in danger of doing.

We have already suggested rather strongly that the virtues, symbols, and structures of an academic institution are not necessarily those of a competitive intellectual workshop, and *vice-versa*. It may perhaps be useful to reinforce the point once more, this time in a particular area. Virtually every school is shredded today by excessive departmentalization and specialization, and by the vast management problems occasioned by a proliferation of institutes, service projects and special programs. Organization of the sort suited to achieve effective concentration and specialization is of the essence in "task force" work, but it is also the bane of wholesome education. Arguing about which is to obtain in the "super-school" is a thorough waste of time. A careful distinction between our institutions can free us from the whole business. What we cannot do is to insist that either form must characterize the other, or that an irrational *melange* characterize a "single" institution, which is now irreparably broken underneath its academic facade.

A similar confusion leads us to assume that large-scale education is more efficient and economically preferable. Large-scale research and problem-solving may be, but the notion is, at the very least, dubious in reference to education.³ It is surely time that someone, perhaps one of the ever beneficent foundations, calculated the true cost (in terms of time and money) of, for example, making a vital *educational* decision in our larger institutions of "higher learning." Flexibility, outwardly so apparent in the vast array of special interests, is in reality incredible rigidity when it comes to such crucial educational decisions as curriculum development, student guidance, and so on. While we may have learned to move with the ease of a leopard technologically, educationally our bulk has reduced us to the state of a wooly mammoth.

Another result of our failure to distinguish the two institutions we now require, and to value them both in appropriate terms, is the problem of curriculum alluded to above. Our content, even for undergraduates, has tended to get structured more and more according to its specialized use, professionally and not educationally. The minute and arbitrary divisions, possibly productive of "scholarship," which characterize many history offer-

³ It is perhaps worth noting that even our large industries have been moving rapidly toward decentralization for precisely this reason: To promote the identity and the motivation of their most highly skilled and creative personnel.

ings might serve as a case in point. Frequently they mark only the divisions of competence which are realistic for the historical researcher, faced as he is with more and more data to be examined. Less and less frequently do they represent valid vehicles for acquiring a general conception of history. General education then becomes an almost insuperable problem: For his requirement in "History," should Mr. X. take a course covering twenty-five years of modern French history, or one involving two-hundred years of ancient history? What obviously needs to be done by the practitioner of history obviously interferes with virtually any grasp of general history by the learner. Nor can we base our hopes on the notion that the insight into "doing" history gained by sitting at the feet (now frequently at cable's-length) of a great historian will automatically carry over in the individual's way of life. When pressed, we all, professor and student alike, know that this is simply a very bad joke, one at which we might laugh, were its consequences not so dire!

The form and magnitude of our "educational" institutions prevent the resolution of the problems of intellectual breadth through the association of faculty and students, that is, through the communal aspects which have previously characterized the best education. We all recognize that in institutions numbering their members in the tens of thousands some smaller unit of distribution is imperative, both administratively and psychologically. One of the most obvious ways to accomplish this (and also perhaps one of the most dangerous, educationally speaking) is by trade lines. Virtually every department—jealous gods indeed!—rushes to isolate its neophytes, if possible into physically distinct areas. A tragically narrowing regimen follows: the student's books, his living quarters, and even where he drinks his coffee and takes his lunch often become carefully circumscribed. In the name of identity and productivity, literary men need not stumble over educators; physicists need not suffer poets or artists. Through this chastening discipline, the optimum state is achieved: Vocational segregation, enhanced by economic segregation in the social sphere, virtually assures the student (and even the faculty member) that he need not encounter anyone who might informally broaden his viewpoint.

The previous consideration leads naturally into a more careful look at two other figures of central importance in the educational world, the president and the student. The academic president is torn assunder by this confusion of images. His desire for resignation—in the administrative sense, not the spiritual—and his frequent cries of anguish make this abundantly clear. Could a more discerning analysis relieve his schizoid condition? Because of the confusion we have been attempting to delineate, he is expected to be what no one man can be: an administrator of a vast intellectual-industrial empire, a fund-raiser for an apparatus too large to appeal to anybody, and a

folksy ceremonial officer and "end-of-the-log" educator. The New Institution calls for an administrator, period. Its finances can and should be justified and secured on their own peculiar grounds and from their appropriate sources. The school demands a leader of a faculty and possibly even a leader of students (though that we shall ever see that day again is probably more of a hope than a certainty, even if reforms come). On one occasion, I had the opportunity of meeting socially a deservedly famous "educator" and university president on the day that one of his faculty members had disgraced himself and his profession because of his involvement in a nationally publicized scandal. This particular president remarked sadly and wistfully that he thought it was too bad; he had never met the man, but he had heard that he was really very good. Any normal person is shocked and offended by that. Why? Because knowing one's faculty is important, whether one is a president or a professor, in an educational institution. One would not, on the other hand, be shocked to learn that the board chairman of a vast corporation did not know his supervisor of parts-replacement. Nor should we be outraged at this particular president, inasmuch as it is our policy that has forced him to grow more like the latter than the former. The trouble is that we are still trying to hold on to a terminology and symbolism which tries quite unsuccessfully to make us think he is or can be both board chairman and president.

The man at the other end of the educational log is equally confused and confusing. The student is, of course, the one chiefly victimized by the growth of our mega-universities, though he is usually the last of our concerns. Paradoxically, the university has frighteningly complicated the search for the purpose and identity it is supposed to support.

The truth of this is so obvious that we can pass on to the less commonly discussed fact that the student presents a confusing appearance to the outsider as well. The "man-in-the-street" assumes that formal education ought not to go on forever; he is suspicious of the "student's" unduly prolonging the luxury of schooling. The fact is, however, that the professionally involved graduate student is not by any means wholly a student. He is also a productive worker in the New Institution; and, were it not for our prevalent confusion, he would be viewed and treated as such. Silly academic degree programs, tuition charges, and the rest of the traditional university carryover, should simply be scrapped. Instead, he should be a paid worker, a new kind of public servant who is learning as a modern-day apprentice in the new intellectual complex, but also doing something entirely relevant to the public good. For the "student" to structure his life, emotionally and financially, as a student, irritated rather than broadened by the symbolic attempt to give him more "general" education (through such things as "minors" in other fields and some of the less useful language requirements) is a pitiful if not harmful

gesture. It should fool no one, least of all the student, though it sometimes does.

One alternative to this anonymity coupled with frustration (and one open to the student on his own initiative) is sheer rebellion in any of a number of areas. The fact that students are beginning to act out this alternative with rather distasteful results and with widespread publicity frightens us just a little. Such rebellions, with or without substantial issues as warrants, are made even more dangerous when, as becomes obvious, neither the administration nor the faculty have any real communication with the participants. When the breakdown actually takes place as it has at the University of California in the latest instance, the whole business comes to resemble (no matter how unfairly) nothing so much as a labor-management dispute in a company town. A clear-cut distinction between education and the practice of the new intellectual vocation might alleviate considerably both the student's frustrations and the institution's problems. And, it should go without saying, not simply to increase the student's docility; if anything, the distinction would be of the greatest value in marking out the areas of responsible freedom.

What then, is our immediate strategy to be? Clearly, this is a question which cannot receive full discussion here. However, our distinction implies that any realistic strategy should have certain defining characteristics, which can be stated in three words: separation, federation, incorporation. Very simply put, the first step is this: to proceed to establish our public centers of research and development in their own right, and at the same time to re-establish effective educational institutions in their own right as well. Organize, administer, and finance the New Institution without the clap-trap of degrees and gowns and pathetic attempts at "general education." Free it for the most effective pursuit of its perfectly valid purposes, and through the means judged most efficient by the relevant criteria. On the other hand, we must also organize, administer, and finance educational institutions, with faculties composed of teachers, with executives who are educators, and with courses of study which are structured educationally and not in terms of a bogus "productivity" which is not theirs to give. We should still expect teachers to stay "alive," but as teachers, and not as new model public intellectual practitioners. We would still hope that the problems tackled in the new institutions would be posed in the education of all, and their results incorporated by educational institutions into all curricula which purport to educate. No one, in short, can argue for a stifling separation; what we can hope for is an intelligent and fruitful integration. But it must be an integration based on the acceptance of the fact that our present universities have ceased to be schools.

In the second place, recognizing the essentially destructive effects of unregulated size which have been forced upon us by the growth of the New

Institution, we should frankly face the issue and create small colleges. The reasons for creating intentionally limited institutions are principally two: to insure at least the possibility of the communal life so important in education, and to permit a broadly representative faculty which is still sufficiently manageable to participate as a whole in the formation of educational methods and goals. Now, whereas artificially limiting size might create a stifling and ingrown atmosphere if done in isolation, a federation of such colleges, in healthy competition on the basis of educational effectiveness rather than size, could probably avoid this pitfall. Furthermore, given such a basic strategy, membership in the constellation of educational institutions could include private colleges as well. Their inclusion seems essential if we are to avoid the monochromatic kind of education which too easily results from exclusively public control.

Finally, we cannot avoid the fact that the apparatus of inquiry, libraries, machines, and special programs of many sorts, is now so complicated and expensive that it cannot be duplicated at random. As a consequence, many of the best minds must perforce assemble about that apparatus. We have argued that while education is properly distinct from either pure or applied research, no false isolation from them is either feasible or profitable. As a consequence, the best strategy might be to incorporate our federated colleges around these complexes, though taking great pains to guard the independence and the proper image of the former. In this fashion the major resources could be drawn upon for educational ends, communication would not be so likely to break down, and the joint functions of building and advancing the total intellectual life of our society could be cooperatively pursued.

Through a description of the application of Information Retrieval techniques to school law the authors suggest the immense potential electronic computers have for helping man cope with the nearly unmanageable proliferation of his own knowledge.

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The Computer and Information Retrieval: School Law a Case Study

In 1851 Joseph Henry, secretary to the Smithsonian Institute, pondered the same problem attacked by modern Information Retrieval. "Everyone who is desirous of enlarging the bounds of human knowledge," he claimed, "should, in justice to himself, as well as to the public, be acquainted with what has previously been done in the same line. . . ." But, Henry observed with concern, the estimated annual 20,000 published additions to human knowledge meant, "the pile will begin to totter under its own weight," and, he feared, "literature and science will be overwhelmed by their own unwieldy truth. . . ." (p. 16) (11)

The size of the pile of "unwieldy truth," of course, has multiplied many hundreds of times each year, and educators, indeed all scholars, who try to

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become "acquainted with what has previously been done in the same line" face an enormous, ever growing problem. Nor is it any longer possible even to stay abreast of the work in any major area of inquiry, and in many fields the traditional tools of the library are becoming obsolescent. To cope with the staggering accumulation of knowledge radically new, super-human systems for the retrieval of information are, obviously, necessary. In fact, the modern high-speed electronic computer has made possible the new field of Information Retrieval. Information Retrieval, according to one expert (11), is:

—a man-machine system combining human intelligence and electronic and photocopying equipment for the purpose of gathering, classifying, and storing factual and textual material, and for retrieving and disseminating this information upon demand. (p. 16)

This paper reports, first, the application of an information retrieval system to the field of school law, but the implications of this report, as the latter part of the paper discusses at some length, extend to other areas of education and, as well, to all fields affected by the explosion of knowledge.¹

School law is an especially appropriate educational field for the application of computerized information retrieval systems. No legal questions can be answered without an exhaustive review of related statutes and opinions, but more than 10,000 volumes contain the approximately 2,200,000 documents comprising judicial opinions alone, and judicial opinions are increasing at a rate of over 10,000 per year. The combination of human frailty and the magnitude of relevant information makes legal searching and indexing costly, time consuming processes of uncertain accuracy. Given these considerations, the importance of a computerized system for the retrieval of legal information needs no elaboration. Legal material, fortunately, is particularly adaptable to a form capable of electronic storage and retrieval. Statutes, by intention at least, are concise and unambiguous. Within each state, moreover, legal information is gathered together in a central depository, and the creator of the retrieval system is spared the task of preliminary organization.

At the University of Pittsburgh Professors John F. Harty and William B. Kehl (4, 5, 6, 7, 8, 9, 10) conducted early experimentation in general legal searches with the electronic computer. Several published papers (2, 6, 7, 8, 10) describe facets of the legal information retrieval programs at the University, and one recent paper (3) contains a statistical evaluation of the retrieval sys-

¹ Two recent publications give good overviews of the variety of types of problems being attacked and the techniques being used and considered. *The Automation of School Information Systems* (12) reports on the general use of computers in the field of education. Another good source is Bushnell and Borko (13.)

tem. Readers are referred to the foregoing papers for a detailed discussion of the retrieval system used in the investigation reported in this paper. Two publications of Bushnell (12, 13) permit a comparison of this with other systems of retrieval.

Although this paper does not describe the details of the retrieval system, two preliminary technical considerations are important. First, the ability of the computer to perform logical operations on verbal material is neither as widely known nor employed as its capacity for processing mathematical data. The computer processes verbal materials through its ability to compare, sort, count and remember the location of symbols. The processes of the detection and matching of symbols usually are referred to as the logical operations of the computer.* Symbols, it is important to note, may be either letters or numbers. Thus, the computer can deal with words and sentences, groups of letters and spaces, as well as with groups of numbers. The symbols which compose a verbal text are stored in computers as magnetized spots on magnetic tape, similar but superior to the kind used on an ordinary tape recorder.

The counting, sorting, comparing and matching capacities of the computer provide a rapid means for performing complex analytical operations on the group of spots representing the verbal text. For instance, the computer easily counts the number of words and sentences. When two blank spaces follow certain punctuation marks, the computer "recognizes" sentences, as distinct from words and phrases. Even more important for purposes of Information Retrieval, the computer quickly and accurately finds and prints out the location of all instances of required words or concepts within a verbal text of unlimited size. The procedure for transferring the words from a printed page onto magnetic tape is reported elsewhere (1), and Kehl, et al., (10) provide a detailed description of the steps necessary to prepare the material for use in Information Retrieval.

A second important technical consideration is that the base of the system used in this investigation is natural language; that is, it consists solely of words and simple combinations of words; however, it may be possible to incorporate syntactical and semantic considerations into a retrieval system. The latter, and more sophisticated, system would have certain advantages. For instance, to find information concerning the food habits of fish one might, now, search texts for combinations of the words "fish" and "eat (s)." However, one would receive a certain amount of useless information, such as "men eat fish," as well as the relevant variety, such as "fish eat worms." Obviously, to eliminate the former category of findings would increase the efficiency of the process. Semantic difficulties are illustrated by a problem encountered in

* The name "computer" could very well be "logic-cr."

using a computer to translate an article in the field of civil engineering. At several points the computer's translation included the words "water goat," and this phrase destroyed the sense of the article. Finally, a human reader discovered that the article concerned "hydraulic rams." In Information Retrieval semantic difficulties will be harder to overcome than syntactical problems.

The purpose of the investigation described here was to test the utility of Information Retrieval techniques for answering questions of school law. Current legal questions were solicited from varied sources in order to determine the groups for whom legal information retrieval has most value. In particular, legal questions were sought from state educational agencies and local school districts and from graduate students and faculty members with special interests in school law.² The computer was employed to search for the existence of statutory information relevant to particular legal questions. For instance, one inquiry, noted as question 81 in Figure 1, was "Is there anything in the law that requires a board of school directors to offer a kindergarten or to offer a high school program?" The computer only answered questions, it is important to emphasize, concerning the *existence* of law; it could not answer questions concerning the *interpretation* of law.

Two procedures were used to frame the questions for machine search. The first framing procedure involved three steps. In the first step the framer divided the question into its component concepts. For instance, in question 81 (Figure 1) the concepts were "kindergarten," "board," "director," "districts," "high" and "schools." In some instances the framer then listed with each concept words similar to, though not technically, synonyms. These are called "searchonyms"; their purpose is to elicit information concerning all

² The researchers would like to acknowledge those people who met informally and provided the project with much help and stimulation. The primary group, comprised of those interested in the application of electronic techniques to retrieving school law, was organized by the late Dr. Robert W. Brittell, Associate Dean of the School of Education. In addition to their attendance at conferences held to acquaint them with the uses of the retrieval system, individual members of the group submitted questions which reflected problems in areas of school law with which they were acquainted. The work group included among others: Dr. C. Herman Grose, former school superintendent, Deputy Superintendent of the Pennsylvania Department of Public Instruction, President of California State College (Pa.), and presently head of the Office of Educational Placement; Mr. Niles Anderson, Solicitor for the Board of Public Education of the City of Pittsburgh; Dr. Richard Wynn, Associate Dean of the School of Education and former teacher of Pennsylvania school law; Dr. Samuel Francis, former assistant supervising principal, whose dissertation was in the area of school law, and who is the instructor of courses in school law; Mr. Joseph Werlinich, doctoral candidate and former administrator in higher education; Dr. Stephen Storkel, who is now a principal in the Evanston (Ill.) Township High School; and Dr. Richard DeRemer, Associate Professor of Educational Administration, University of Pittsburgh.

The second group, whose assistance proved invaluable, was the school law class itself (Educational Administration 257). Their patience and enthusiasm merits the individual listing not permitted in such a short space.

FIGURE 1

Example of a School Law Question Prepared for a Standard Computer Search

UNIVERSITY OF PITTSBURGH

INQUIRY #81

MACHINE SEARCH BY: Kurfearst

QUESTION: Is there anything in the law that requires a board of school directors to offer a kindergarten or to offer a high school program?

Kindergarten	+	Kindergarten	Print
Board	+	Board-s	
	+	Boards	81A
Director	+	Director-s	
	+	Directorn	
	+	Directors	
	+	Directros	
	+	Diredctors	
	+	Directors	
Districts			81B
	+	District	
	+	Districts	
	+	District	
	+	District	
	+	District-s	
	+	Districts	
	+	District	
High			81C
	+	Secondary	
Schools	+	Senior	81D
	+	School	
	+	Schools	
	+	Schoolship	
	+	Schoool	
81D			81E
81A	S	81E	81F
	w+2+2	81E	
	S	81B	
	+	Schoolboard	
81E	D	81F	Print
	S	81C	
	+	School-district	
	+	School-districts	
81D	D	81F	Print
	w+1+2	81E	Print

facets of the concept. In question 81 the searchonyms are "secondary" and "senior" with "high." As another example, the words "questionnaire," "survey," and "experimental" would be included in the broad category of "research."

The framer, in the second step, checked previously compiled word frequency lists of the Statutes. In particular, he noted all the misspellings of the words under consideration. These, in turn, were included within the format of the inquiry, as illustrated in Figure 1. Third, the framer decided the relationship in which the concepts were likely to be found in the document and utilized a set of commands to link concepts. For information regarding the description of the commands see Kehl, et al. (10) Figure 1 illustrates the linking of concepts. For instance, the concept "high," including "secondary" and "senior" and labelled "81D," is linked with concept "81E," "schools," to form concept "81F," "secondary or high schools."

The second procedure for framing inquiries is KWIC (Keyword-in-Context Program) search. Inquiries are framed as in the first procedure, but the inquiry itself consists of a word or phrase rather than a question. Examples of KWIC searches are given in Figure 2.

FIGURE 2

List of KWIC Searches

- KWIC 1 "State Teachers' Colleges"
- KWIC 2 "normal schools"
- KWIC 3 "Supervising principal"
- KWIC 4 "first Monday in July"
- KWIC 5 "handicapped children"

The advantage of the program is that it enables the investigator to examine the context in which a word is used within the text. The computer, that is, not only prints out citations but also each instance of the word in the text and an equal number of characters (letters, numbers, punctuation) to the left and right. This quickly shows the investigator the various contexts in which the word is used and saves him from checking all citations.

The techniques of machine search were used for nineteen legal questions of value to educators. The titles of the searches are listed in Figures 2 and 3. To find answers the computer searched both the statutes and the Attorney General's opinions. Local school districts provided two inquiries; state education authorities and people connected with the University each provided roughly half of the rest. Probably, these figures reasonably approximate the potential distribution of users of mechanical search procedures in school law. The statutes and Attorney General's Opinions adequately answer questions

FIGURE 3

List of Standard Searches

- E 9 "May a school district invest surplus funds? If so, are there any restrictions?"
- E 10 "Can a school district establish a junior college?"
- E 12 "Is there any procedure whereby a school district may dispose (sale or otherwise) of unneeded or excess equipment or materials?"
- E 14 "May two or more public school districts jointly purchase supplies and/or equipment, or construct and/or operate school plants?"
- 23 "What are the provisions for the health examination of school children?"
- 75 "What powers do the Superintendent of, the Department of, and the State Council of Education have over private and parochial schools?"
- 81 "Is there anything in the law that requires a board of school directors to offer a kindergarten or to offer a high school program?"
- 83 "Can a school board buy liability insurance?"
- 89 "What powers does the state have in educational research and testing?"
- 179 "What are the powers and duties of the State Council of Education, Superintendent of Public Instruction, and Department of Public Instruction?"
- 180
- 181
- 183 "Is an Assistant Superintendent a public official under the law?"
- 196 "Is the guidance counselor a member of the administrative staff or is he a member of the teaching staff?"

posed by state and University personnel. The questions posed by school districts, on the other hand, often involve court opinions and matters of interpretation.

To evaluate the adequacy of the results an attorney hand searched the answers to some of the same questions handled with the computer. Figure 4 represents the citations found by an attorney searching question 81 (whose preparation for machine inquiry is illustrated by Figure 1).

First the attorney read the state constitution. Next, he checked the legal index for entries related to "kindergartens," high schools," "Board of School Directors," and "School Directors." Interestingly, both the farmer of the inquiry for the computer and the attorney, working independently, broke the question down into similar concepts. Both, that is, used "kindergartens," "high schools," and "Board of School Directors." Aside from the question of time, the greatest limitation on the attorney was his dependence on a manually made index, whereas the computer search inspected the actual textual material in entirety.

The documents retrieved by both the computer and the attorney were evaluated through informal and formal methods. In practice, of course, results are gauged by the simple question, Do they enable the lawyer to go ahead with appropriate action on a sound legal basis? Similarly, the inquirer who is not an attorney judges the degree to which his question is answered. For example, the senior author asked, what statutory provisions permit the

FIGURE 4

Manual Search for #81—a Partial Listing of Index Entries

CONSTITUTION	<i>Education</i> Art. 10, § 1. Duty of GA to provide public education Kindergarten — Nothing High School — Nothing School Districts — Nothing applicable Superintendent of Public Instruction — Art. 4, § 20
INDEX	<i>Kindergartens</i> 24 § 5-502 — Establishment 53 § 16702 — Philadelphia 24 § 25-2502 — Reimbursement from Commonwealth Supplement 24 § 15-1501 — Days of Instruction
INDEX	<i>High Schools</i> Generally 24 § 16-1601 to 1613 71 § 352 — Classification 71 § 354, 1023 — Course of Study — Duty to Determine Directors, See School Directors 24 § 5-502 — Establishment Joint High Schools, See 24 § 16-1602 — New, Establishment 24 § 1058 — Visitation Supplement — Nothing Additional
INDEX	<i>Board of School Directors</i> See School Directors Supplement — Nothing Additional
INDEX	<i>School Directors</i> Repeat 24 § 5-502 Admission of Beginners — 24 § 13-1304 Assignment of Pupils — 24 § 13-1310 Brands of Study Required — 24 § 10-1005 Buildings, Duty to Provide — 24 § 7-701 Closing Schools — 24 § 13-1311, 24 § 11-1153 County Board of School Directors Sub-Chief Exec. Officers, Duties — 24 § 9-926 Sub-Powers and Rites — 24 § 9-925 Duties — 24 § 5-501 to 5-523, 336 to 339 One Room Schools, Closing — 24 § 13-1311 Reports — High School Information — 24 § 16-1606 Special Schools — 24 § 19-1921 to 19-1926 <i>Supplement</i> Closing Schools — 24 § 5-524

state to undertake educational research? The inspection of the computer printout, without the aid of an attorney, provided a sufficient answer.

However, more formal means of evaluation were also used. The instrument was a rating scale devised by John Harty and his colleagues of the Health Law Center of the University of Pittsburgh. This system categorizes the documents retrieved according to their relevancy to the question. All

documents are rated "A," "B," or "C." "A" documents are ones that must be found in order to adequately answer the question. "B" documents are of marginal value, immediate visual inspection cannot determine their degree of relevance. "C" documents are not relevant to the inquiry. Table 1 reports the results of an attorney's evaluation of the machine and hand searches of eleven inquiries. In Table 1 "sections" and "statutes" are differentiated. Statutes are considered to be composites of related "sections" rather than entire legislative acts. A single legislative act, as passed, usually includes a group of laws, and to provide searchers with reasonable categories some arbitrary breakdown was necessary.

TABLE 1
Standard Search Evaluations

Sections			Statutes						Statutes Retrieved Only By			
	Machine			Manual			Machine			Manual		
	A	B	C	A	B	C	A	B	C	A	B	C
E10	0	0	5	0	0	—	0	0	5	0	0	—
23	15	2	26	15	1	1	7	2	22	4	1	0
75	32	2	25	20	4	13	19	2	20	15	2	9
81	7	30	62	6	10	8	6	15	41	5	4	1
83	5	2	68	5	0	27	5	2	53	5	0	27
179	87	2	0	51	0	—	65	2	0	38	0	—
180	243	6	14	148	0	—	93	1	8	65	0	—
181	214	12	21	153	0	—	105	8	7	66	0	—
182	39	2	38	—	—	—	16	2	13	—	—	—
183	0	0	23	0	0	—	0	0	23	0	0	—
196	0	0	41	0	0	—	0	0	30	0	0	—

Table 1 reveals the effectiveness and efficiency with which the computer retrieves information relevant to questions of school law. The last two columns, "Statutes Retrieved," are particularly important. The machine search located 130 "A" or crucial documents, which the attorney's hand search failed to find. On the other hand, the attorney found only 14 "A" documents missed by the machine. Likewise, the machine located 29 "B", or marginal documents missed by the attorney, who exclusively retrieved three. The cost of greater thoroughness was 264 "C," or nonrelevant statutes retrieved by the machine against only 39 by hand. Nevertheless, visual inspection quickly indicates which statutes are not relevant. At any rate, visual inspection of a few hundred statutes is infinitely faster and less costly than the alternative, a

diligent hand search, on a page by page basis, of all 75 volumes of *Purdon's Pennsylvania Statutes Annotated*.³

These results reveal that the computer is an invaluable tool for dealing with questions of school law, and the investigation also suggests other possible applications of the computer to document analysis. The system of Information Retrieval could be applied to the codification of school law. All instances of general concepts could be searched, printed and bound together. This might be particularly useful for concepts such as school district reorganization since the law on this topic is scattered throughout the volumes of statutes and opinions. Sub-codes could be prepared in a similar manner. For instance, one could obtain easily a copy of all the school laws concerning attendance, buildings, finance or even very narrow areas, such as Class One Cities. The sub-codes would provide an accurate, comprehensive and compact digest of all relevant legal information on these specific topics. In a slightly different vein, the legislature could be informed of certain classes of school districts on which the law is silent.

The legal content of the magnetic tapes easily can be kept up to date by the attachment of a "Flexowriter" to a print setting machine. As print is being set, the "Flexowriter" or similar machines punch cards or mark a magnetic tape for input to the computer. Thus, new laws would be simultaneously printed and added to the tape library for computer use. This procedure would reduce input cost and make all laws immediately available. A particularly exciting potential use of the magnetic tape library is the possibility of developing new school laws. For example, a magnetic tape library could include the school laws of several states, and applicable out-of-state statutes could be rapidly identified, printed and distributed to legislators. The computer could also be used to link sections from the laws of various states in an experimental attempt to arrive at more satisfactory statutes. Perhaps the greatest value of an inter-state library of legal tapes would be the ability to locate and print relevant judicial opinions, which, it was noted earlier, are increasing with phenomenal rapidity.

The obvious limitation of computer techniques for law is, to repeat, their inability to make decisions or interpretations. Thus, these results do not threaten lawyers through automation. Rather, law libraries transferred to magnetic tapes in a computer will free the lawyer to concentrate on the more interesting and essential aspects of his profession.

To turn from the field of law, the investigation reported here indicates the utility of information retrieval to social and natural scientists. Particularly,

³ For a complete discussion of all inquiries the reader is again referred to the original report (1) submitted to the United States Office of Education.

techniques of Information Retrieval have great potential for indexing and abstracting, two perennial scientific difficulties. Two or three years often elapse between the time an article is published and its abstract appears. Moreover, the abstracting must be performed by professionals, which is not only costly but diverts their time from research. The experience of the authors suggests that it may be cheaper to put the whole article onto a magnetic tape, or, at least, to take an abstract prepared by the author, even if he does not know how to prepare text for Information Retrieval and omits certain key words or concepts. Possibly one could use the general statement of the problem at the start of an article and the summary and conclusions at the end. At any rate, any key words or concepts missing in the author's summary or abstract could be added at the end of the material to be transferred to tape. These words need not be in the form of sentences, or even phrases. To transfer printed material to tapes is, moreover, a task that can be performed relatively inexpensively by semi-skilled labor.

At the end of the year a concordance of the abstracts and key words could be prepared easily. This concordance, an elaborate, accurate and comprehensive index, would give the exact location in a journal of each one of the key words and concepts. Each two, three, five or ten years, it would be a simple procedure to combine the indexes. In this way, blocks of years would be inexpensively and quickly indexed and the scientist spared from inspecting inadequate, yearly compilations. Systems of cross indexing would be possible, too. Titles, authors and abstracts, put onto different cards, would form complete, alphabetized lists of names and subjects. Thus, one could locate, for instance, every article written by a certain author within the last ten years or find every article concerning, say, schizophrenia within that period. One could even delimit the references obtained by calling, to take one example, for schizophrenia plus adolescence, plus infancy, plus childhood, plus any other synonym for people under eighteen years old. Indeed, complete, periodic, mechanical searches of the literature could be performed and made available to researchers.

The techniques of Information Retrieval, moreover, can greatly simplify the preparation of vocabulary lists. The magnificent Thorndike lists, now thirty years old, have not been replicated, probably because of the expense. But through the techniques of Information Retrieval one could easily make not only a modern list but various lists, comparing, for instance, newspapers and magazines, or the words appearing in the reading material of different social, economic, occupational and educational groups. Already the senior writer of this report and a colleague have started to work on the vocabulary list of first grade books. To make an analysis of *speaking* vocabularies, even, is also entirely feasible with computer techniques. All that is necessary to

analyze the spoken vocabularies of, say, mentally defective, culturally deprived or first grade children is to transfer typed transcripts of recordings to magnetic tape.

SUMMARY

The oppressive weight of unwieldy truth, pondered by Joseph Henry in 1851, increases prodigiously each year. Although today the problem is far greater than Henry's, the existence of the modern electronic computer provides at least a tool for coping with the amazing fund of information. Through the techniques of Information Retrieval the computer organizes, sorts and locates verbal material. This paper has reported a successful attempt to apply Information Retrieval to school law. The computer, it has been shown, can answer questions concerning the existence of laws more quickly and accurately than a professional lawyer searching indexes and statutes by hand. Yet, the computer provides no interpretations and makes no decisions. On the other hand, this investigation suggests that the technique of analyzing verbal material with a computer has great potential both within and without the legal field. Within law the computer can codify statutes into general and sub-codes as well as apprise legislators of relevant laws and opinions from other states. In the field of scientific research the techniques of Information Retrieval can contribute to the solution of the nearly unmanageable problems of indexing and abstracting and, indeed, can provide elaborate and varied indexes covering large blocks of time. In the future the customary survey of the literature may be provided quickly and thoroughly by machine. Finally, in the area of educational research the capacities of the computer for analyzing verbal materials promise to provide modern, highly differentiated vocabulary lists. Clearly, however, these suggestions barely indicate the potential of a tool that man has had to develop to cope with his own knowledge.

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In "Teaching, Acting, and Behaving" (HER, Fall, 1964)
Thomas F. Green distinguished between "norm-regarding"
behavior and "habitual" behavior. Three philosophers
join Green in a discussion of the article.

Discussion

TEACHING, ACTING, AND BEHAVING

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My reactions to Professor Green's article are of two types. One set deals with the substance of what Mr. Green says and the other with the way in which he says what he says. The former, I'm sure, is most appropriate, but the latter may seem inappropriate and unkind. I feel, however, that it is appropriate to draw attention to the language used by one who approaches ideas through the medium of linguistic analysis or at least with a concern for the ambiguity of certain terms. Furthermore, my intent is not to be unkind, though it might seem so, but rather to point to what I take to be slight technical flaws which tend to obscure the points Green tries to make and which, if corrected, provide a surer footing upon which to continue the ongoing philosophical discussion of the ideas involved in talking about learning rules and principles.¹

Basically, I find the substance of Mr. Green's paper to be sound with regard to: the basis for his distinction between "behavior" and "action," the theses that teaching cannot be regarded merely as "behavior" and that the aim of teaching if regarded as the changing of behavior is a short-sighted and dangerous view, and finally that human actions play an important role in the

¹ I see Green's article in the context of the discussions of moral education and learning rules or principles in which such people as McClellan, Martin (nee Roland), Archambault, Scheffler, Hare, *et al.* have taken part.

creation of norms. Furthermore, I think that Mr. Green has provided a valuable service in carrying a step further the philosophical discussion of learning rules and principles. Nevertheless, there are some substantive points with which I would like to take issue.

In Green's lengthy discussion of the notion of learning a rule, he makes what I take to be some questionable assertions. In talking about the learning of rules, he implicitly recognizes the ambiguity of the notion of learning by talking of (and thus discriminating between) learning *that* and learning *to*, a verbal sense of learning the rule and an active sense of learning the rule. However, to say that " 'learning to obey K [a rule]' implies 'learning that K' " and to base this assertion on the grounds that "it seems plausible to argue that if [someone] has learned to obey the rule. . . , then in *some sense* he must have learned the rule" (p. 512, *italics mine*) is questionable on at least three counts:

1. "Learning that" as generally treated by philosophers since Ryle has been taken to mean the acquisition of some proposition or statement which is normally evidenced by the learner's capacity to repeat the statement on demand. But Green frequently states that learning to obey a rule does not necessitate being able to state the rule. (cf. p. 510) Therefore learning to obey K does not imply learning that K if we adopt this prevalent sense of "learning that" which is, I believe, the sense dominantly used by analytic philosophers.

2. To say that in *some sense* one has learned a rule is not to show that the particular requirements for "learning that" have been met. Indeed, if someone has learned to obey a rule, and thus we reason that he must in some sense have learned the rule, we should be aware that the notion of "learning" itself is ambiguous and that there are many possible candidates of different sense to meet the requirement of *some sense*. For example, learning *how to* obey a rule is generally taken as distinct from learning *to* obey a rule.² Thus, it could be argued that learning to obey a rule is evidence for learning the rule in the sense that one has also learned *how to* obey the rule and thus meet the requirement of "some sense."

3. Finally, it may be that the sense in which one has learned the rule as evidenced by his actions is merely that he has learned to obey the rule or to put it another way, learning to obey a rule is a kind of learning which stands alone. I personally don't care much for this alternative, but Green's discussion of the logical possibility of one knowing a rule without having learned it (p. 512) seems to leave this possibility wide open. That is, one could (if he agrees with Green) know a rule without having learned it in *any* sense and

² See Israel Scheffler, *The Language of Education* (Springfield: Chas. C Thomas, 1960), Chapter 5.

then proceed to learn to obey the rule (which is obviously different from knowing it). There is, of course, a final possibility, and that is that the "*some sense*" which Green refers to is a sense not yet distinguished in the analysis of the concept of learning.

In this last point above, I have referred to Green's discussion of knowing a rule without having learned it. Though he says that this point is not relevant to his argument (and I agree), it should be pointed out that in this discussion he produces either a patently false line of reasoning or a tautological argument. He says, "If we are to say to someone both that he knows a certain rule on the grounds that he obeys it, and also *that he did not learn the rule*, it would follow that he did not *learn* (sic) to obey the rule." (p. 512, italicized phrase mine)

The argument is false if by the italicized phrase above, Green means that he did not learn the rule in the sense of learning *that* (which seems to me to be his intention) for it is logically possible for someone either to know that K (a rule) and not obey K or to know that K and obey K. If one did know that K but did not obey it, then it is quite possible that he can learn to obey it. Thus it is *not* the case that knowing a rule and obeying it implies that one did not learn to obey the rule as Green asserts.

Of course, the whole argument may be tautological, for if Green means by "learn the rule" in the italicized phrase "learn to obey the rule," then he has said no more than: if one knows a rule, obeys it, but did not learn to obey it, then he did not learn to obey it.

In terms of the ambiguity of the notion of learning Green presents another problem. He distinguishes between the active and verbal senses of having learned a rule or principle. (p. 514) By the active sense of learning a rule he means that we have learned to actually obey the rule in acting (learning *to*). By the verbal sense, he means that we can state the rule (learning *that*). He suggests and then rejects the possibility that there is a third sense, the "critical" sense (p. 514 ff.) which is the "capacity to make critical judgments" with regard to acts of obedience to the rule. One reason offered by Green for rejecting this "critical" sense as a separate sense is his argument that learning the rule in the verbal sense must include learning it in the critical sense. (p. 515) But if by the verbal sense he means learning *that*, then I would suggest that one can learn and state a rule without being able to apply the rule in any critical judgment, or to put it another way, to learn that K without *understanding* K.

For example, as an experiment I have taught my daughter the rule that she ought not to use a double negative in a sentence, and she can produce this rule on demand to show that she has learned it in the sense of learning *that*. But she does not understand it and hence cannot make critical judg-

ments with respect to it. Yet, there seems to be no doubt that she has learned *that* she ought not to use a double negative. In other words, there may be another sense of learning which involves understanding which could be discriminated and made basic to learning a rule, but as Green's argument now stands, learn that K (a rule) is *not* "in any case to have acquired the critical capacity to discriminate," (p. 515) as this example demonstrates.

My final substantive comment is directed at the adequacy of the criteria which Green produces to indicate that one has learned to obey a rule. These are:

1. One must "acquire a disposition to act in a certain way [in accord with the rule]." (p. 509)
2. "One [must] adopt the attitude that violations of the rule are incorrect or at least improper." (p. 511)
3. One must "acquire the critical capacity to discriminate [between correct and incorrect applications of the rule]." (p. 515)
4. One must "regard the rule as valid . . . as binding upon oneself . . . [one must] be loyal to, . . . faithful to [the rule] or be committed to it" (p. 521) and [must] allow [the rule] to work its way into the bowels of one's being.

This fourth criterion provides for Green the very grounds for existence of rules, norms, and principles in the world. He seems to say that only by firmly believing in the righteousness of a rule and acting in accord with it does a rule obtain real existence.

Now it is this last criterion which, though it makes abundant idealistic and humanistic sense, leads to too rigid a limitation on the applicability of the idea of having learned to obey a rule to a particular action.

Let me illustrate my point by a counter example. Imagine Mr. Abel, a Jew in Hitler's Germany. He learns a rule (that K) which states "Jews must wear the star of David prominently displayed on their outermost garment at all times." He also learns to obey the rule. That is, he (1) acts in accord with the rule, (2) adopts the attitude that violations of the rule are incorrect (he admonished his son for failing to obey the rule), and (3) he can discriminate between correct and incorrect applications of the rule. But *he does not* (4) believe the rule is a *valid* rule! In fact (*re* 2), one might argue that he does not even adopt the attitude that violations of the rule are incorrect. But to say that he has not learned to obey the rule seems ridiculous. He has learned to obey the rule, but perhaps not for the reasons Green would like to be *good* reasons. Be that as it may, and disregarding the value assumptions which might be inherent in Green's article, it should be clear that this ordinary sense of having learned to obey a rule is not included in his analysis. The analysis is not complete. This is not a charge, but rather an invitation for further analysis.

I must quickly turn now to a brief statement of my second type of comment concerning the way in which Green talks about his ideas. Though Mr. Green is quite explicit in his introductory remarks regarding the difference between explaining human conduct by means of citing a general law or generalization and explaining the same conduct by means of an agent giving a rule or principle of action as the reason for his conduct, I think it an unfortunate choice of terms which is used to initially distinguish between these different forms of explanation as "conformity to *rule*" and "obedience to *rule*." (p. 508) General laws, as Mr. Green himself clearly and correctly states, are descriptive. And being so, they are not *prescriptive* as the notion of "*rule*" generally implies. It seems that Mr. Green recognizes this when he uses the terms "conformity to a *law* of behavior" and "obedience to a *rule* of action" (p. 508), but just a few sentences further he again talks of "this contrast between conformity to *rule* and obedience to *rule*." (p. 508) Furthermore, he seems to add to the confusion by speaking of a form of this distinction as "*norm* conforming" and "*norm* obeying." (p. 508) Again, the use of the word "*norm*" connotes prescription while it would seem that at least part of what he intends in this distinction is to differentiate between a type of human conduct which is explained descriptively without reference to the individual's concern with certain appropriate prescriptions (behavior) and an explanation which provides as a reason for that conduct, some prescription (action). In fact, he uses the word "*norm*" in this conventional sense in the latter part of his paper. (see p. 522)

In a paper whose avowed aim seems to be to overcome ambiguity, I find that even though this basic distinction between behavior and action seems quite proper, the ambiguity of description and prescription is fostered by Mr. Green's choice of "*norm*" and "*rule*" terminology to elaborate this distinction.

In a similar vein I would argue that Mr. Green ought to be a bit more consistent in his application of the terms "behavior" and "action" once he has stipulated that they will be used to make the differentiation intended. Witness these phrases:

"fail to conform their *behavior* to [the correct principles]" (p. 513)

"in his critical appraisal of *behavior* that violates the rule" (p. 515)

"norm-regarding *behavior*" (p. 515)

"regard[ing] a rule of *action* as a principle . . . without permitting it to govern one's *behavior*." (p. 520)

This hardly makes for consistent adoption of one's own terminology!

These last, however, are merely technical points which could easily be corrected. The broader substantive aspects demand more consideration than given by me here. I feel that Mr. Green has admirably carried the philosophi-

cal discussion of learning rules of conduct beyond the boundaries already established by others. An explorer should not be judged by the minor errors in his map, but rather by the fruitfulness of his journey into the unknown measured in terms of the vision of it with which he provides the future traveler. In this respect, I find Mr. Green's article most helpful and stimulating.

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I am in sympathy with the general intention of Professor Green's article. There are important distinctions to be made within the philosophy of mind which are crucial for demarcating the concept of "teaching" from other concepts such as "conditioning." I do not think, however, that Professor Green has made these distinctions at the right points or in the right way. In other words I think that he has raised most of the right questions but, apart from his very interesting treatment of "learning that" and "learning to," which I have not space to discuss, I think that he has usually given the wrong answers to them. Therefore, in marshalling some criticisms in a rather summary fashion, I only want to raise doubts about the way in which Professor Green has done the job, not on the importance of the job that he has tried to do.

"Behaviour" is an extremely cloudy concept which has been made even cloudier by the fact that Behaviourists have had no clear concept of "behaviour." It can be used narrowly to cover actions, activities, and performances,¹ or more widely to include reflexes, emotional reactions, lapses from actions and performances, and things like dreaming, hysteria and fugue states. It would seem very odd to use the concept of "behaviour" in such a way that actions were ruled out as being forms of behaviour. Furthermore to make a sharp contrast between "behaviour" as that which conforms to certain generalisations and "actions" as things done in obedience to certain rules is question-begging. For even if actions are to be picked out in this way there must be some underlying model of man as a purposive, rule-following animal which is presupposed in the generalisations which are in fact made about his actions.² It is true that reflexes, emotional reactions, lapses from action, etc., require a different sort of explanation from that appropriate to actions; but

¹ See D. Hamlyn: "Behaviour" in *Philosophy*, 1953.

² See Carl G. Hempel: "Rational Action" in *Proceedings and Addresses of the American Philosophical Association*, Vol. XXXV, Oct. 1962.

it does not follow from this that no covering law type of explanation of actions is possible.

Professor Green is I think fundamentally mistaken in putting "habits" into his "behaviour" basket, which he contrasts with "actions." "Habit," I know, is another cloudy concept; but if we are talking about habits at the human level, as I have argued elsewhere³, "habit" is a term which we use to say extra things about people's *actions*. We can only call something a "habit" if it is the sort of thing that we could, in principle, have reasons for doing and the sort of things that, in principle, we could stop doing if we tried. It would be odd to talk of a heart-beat or a nervous tic as a habit. Forms of passivity such as stomach-aches or feelings of pity or fear are not properly described as habits either. When we describe an action as a "habit" we suggest that the man has done this very thing before and that he will probably do it again. "Habit" also carries with it the suggestion not only of repetition but also of the ability to carry out the action in question automatically. The art of living consists, to a large extent, in reducing most things that have to be done to habit; for then the mind is set free to pay attention to things that are interesting, novel, and worth-while. We must also distinguish talking about people's habits from saying that things are done "out of habit" which has extra implications. (See p. 63 of my article.) In brief "habit" is not used to talk of forms of "behavior" that are not actions; rather it is used to pick out extra things about actions and only actions. A compulsive is surely acting on a rule; indeed he is acting too much on a rule. But are not his actions a case of "habit?"

Professor Green's insistence on the connexion between action and obeying a rule may be too narrow in another way, depending on how precisely he is using the notion of "rule." Certainly there is an internal connexion between the concept of "action" and of "wanting." "Wanting" as distinct from "wishing" suggests the grasp of means to an end. What is to count as an "end" must therefore come up to some kind of *standard*, or be determinate in some way, to function as something that could be wanted.⁴ But these requirements seem far less full-blooded than Professor Green's notion of obeying a rule. If a man sees a face at the window and becomes immobilized with fear he is exhibiting an emotional reaction but is not acting in a strict sense. If, on the other hand, he sees the face and quickly breaks the window-pane to get at the face, he is certainly acting. But is he obeying a rule? The situation seems rather too structureless for anything like this to be said of him.

³ See my article on "The Paradox of Moral Education: Reason and Habit" in Niblett, W. R. (Ed.) *Moral Education in a Changing Society*.
⁴ See my article "Emotions and the Category of Passivity" in *Proc. Arist. Soc.* 1962-3.

Even when one leaves aside these general questions to do with demarcating the concept of "action" and examines Professor Green's treatment of the specific notion of "obeying a rule" the language which he uses seems altogether too strong, and hence too misleading, to make the points that he wishes to establish. He argues that to accept a rule is to accept it as binding, or to accept it as valid. He suggests that there is no difference here between the notion of "valid" and "binding." "It is one thing to ask of any normative rule or principle what makes it valid or obligatory. It is a wholly different thing to ask what constitutes accepting it as valid or obligatory. Validity is usually regarded as a property of rules; but we wish to ask not about a property of rules, but about the nature of a certain human act, viz, the act of accepting rules as valid." (p. 520) The difference that he wants to stress, is that between understanding a rule from the outside and accepting it as binding. This is fair enough. But it only confuses issues to make this point by equating the notion of a rule being binding with its being valid. Children, in what Piaget calls the "transcendental" stage, accept rules as binding all right; they accept their guiding function in regard to their own conduct. But it takes quite a time for them to develop the notion that rules can be valid or invalid. Validity is a property of rules. There is also a type of human act, which those capable of legislative functions can exhibit, namely accepting rules as valid. But this is a much more sophisticated business than merely accepting rules as binding. It is surely a mistake to build the notion of "validity" into the minimal notion of accepting a rule as a rule to guide one's own conduct. When Professor Green goes on to use words like "loyalty" and "faithfulness" in relation to rules, as if this were the primary sphere of application for such concepts, his treatment fairly shrieks with uplift about history, commitment and God knows what else! The point is surely that terms like "loyalty" and "faith" have primary application in the context of attitudes to persons or to groups. (cf. Hobbes on the difference between "faith" and "knowledge".) They are used derivatively when applied to the acceptance of rules.

The intention of Professor Green's analysis is to draw out certain implications for education. He argues that the

dogma that the aim of teaching is to change behavior is both patently false and dangerously misleading. The aim of teaching is not to change people's behavior, but to transform behavior into action. Behavior may be changed by methods which bear not the slightest resemblance to teaching, e.g. lies, slander, group therapy, threats, etc. (p. 517)

This is acceptable enough in that it constitutes an attack on the Behaviourist tendency to regard teaching as a way of "shaping" people's behaviour towards ends which are unsupported by argument by methods which are morally

dubious. But why should there be just one aim of teaching? And why should this particular one be selected? The education of the emotions, for instance, is a very important sphere of education to which teaching is surely relevant. It would be strange to regard the teacher's task in this sphere as that of transforming behaviour into action. Why all this stress on action? The teacher might be more interested in developing states of mind or forms of enjoyment which are not closely connected with action. Actually I think the teacher should be more interested in developing types of *activity* which transcend Professor Green's rather Kantian concern with actions. But to elaborate this point would require another article!

My sympathies, therefore, are all with Professor Green in his endeavours to expose the conceptual confusions and moral dangers in the behaviourist approach to teaching. But, because I think that Professor Green's own starting point in the philosophy of mind is confused, I do not find his position much more acceptable than that of the behaviourists whom he attacks.

JAMES E. MCCLELLAN
Temple University

It was gratifying to see Thomas Green's "Teaching, Acting, and Behaving" in the Fall issue of this review. Its appearance marks an important step in freeing educational discourse from the language of psychology, a language which, despite its utility for some purposes, does not admit certain crucial distinctions necessary to talking good sense about the purposes and processes of teaching. Specifically, the dreadful definition "Teaching is changing behavior" needs to be abandoned, so that we may distinguish those instances when our teaching *is* directed toward changing behavior (e.g. in typing class) from the more frequent case in which, as Green puts it, we seek to "transform behavior into action." (p. 517)

Abandoning psychology as a basis for explaining "action," Green employs, first, a philosophical, linguistic analysis and, second, an existential exposition of the conditions for human freedom. Concerning the former I wish to indicate some reasons for believing that Green's treatment represents more the promise of an analysis than its achievement; concerning the latter I will say only that it seems to rest on the incomplete linguistic analysis and is, in any event, unpersuasive to those who reject the "bowels-of-one's being" theory of commitment. (p. 522)

Let us grant "that in some sense . . . there is a pair of contrasting concepts" embedded ambiguously in ordinary language, such that to explain why a per-

son did something may be to produce either (a) a law-like generalization correctly applied to the particular instance, or (b) the reasons, motive, or beliefs of the agent himself. (p. 508) Some events, e.g. reflex behaviors, admit of only the first sort of explanation; it's an open question whether there is a class of events admitting only the second. Green does not argue this question: he is willing to allow that all human events *may* be treated under the aspect of causal laws; his concern is only that it is possible to treat some of them otherwise; i.e., as instances of norm-regarding or rule-obeying action.

Green's formula for teaching—"transform behavior into action"—means to teach rules, not only "by discipline and practice" (p. 516) but also with an "active understanding," enabling the learner to obey the rules with foresight and freedom as occasions demand. The latter means that the learner must also be free *not* to obey the rules. But can we say that a person has learned a rule unless, on the appropriate occasion, he obeys that rule? The strength of Green's analysis lies precisely here, in his demonstration that it is the *critical* sense which counts most, not just what the learner does or says on cue. (pp. 509-16) Close examination of Green's argument will reveal, I think, that he has escaped the ancient hang-up between the *verbal* sense of learning a rule (the learner can state it) and the *active* sense (the learner's behavior conforms to the rule). This hang-up itself may have originated in our dependence on the language of behaviorism.

But Green's arguments stop just when one would expect them to begin in earnest. We become a little uneasy when we see "rule," "norm," "criterion," "principle," "law," and "canon" used interchangeably; our uneasiness increases when rules of grammar, chess, arithmetic, figure skating, scientific study, horse judging, traffic, *etc. etc.* are treated as equally, and in the same sense, "rules of action." Green convinces me that the *attitude* of reasoned criticism is essential to them all; that is to say, in each case we would agree that a learner had, indeed, learned the rule *as rule* (not merely acquired a habit or a sociological fact) if and only if the learner exhibited the attitude of reasoned criticism when faced with instances—his own and others'—of violations of the rule. But this is to be convinced of very little, merely that we can put a number of very different sorts of things under one label. The word "attitude" has lent itself to that kind of label usage quite often, e.g. by psychologists.

For example, if one is faced with a double negative in English, a critical attitude is aroused. Suppose one is faced with "The latts were niss for gib" in a context where one expects an English sentence. The latter is also a violation of a rule (that one should use English words in English sentences); but to say that the critical attitude is aroused is immediately to recognize how differently the expression "critical attitude" is being used in the two instances.

Or consider the person whose opening three moves in a chess game guarantee his defeat by a well known defense. Now contrast the attitude toward that player with what one would feel toward a player who moves his knight seven squares diagonally. Again, Greens says "It is the character of any rule that it requires similar action in similar cases. . . ." (p. 521) This, we may say, is a rule for rules. Would we have the same attitude toward a teacher who inadvertently gave dissimilar grades for similar performance that we would have for one who flatly denied the rule which requires similar grades for similar performance?

The fact is, of course, that rules come not only in different kinds, i.e. apply to different classes of events—horse judging, figure skating, etc.—but also in different grades or orders. Some rules are structural necessities of thought and action itself, while lesser order rules are merely forms for conveying good advice. I suspect that further analysis would reveal sharp differences in the senses of "teach" and "learn" appropriate to different orders or grades of rules, differences concealed in Green's insistence that the property of "critical attitude" is common to learning all of them.¹

That Green is sensitive to this point can be seen in his strange method of avoiding the infinite regress toward which his views can be pushed. It would seem that if one learns the rules of, say, the judging of horses, one is still not prepared to face the world as a judge of horses, for one must learn a set of further rules governing when and how to apply the rules of judging horses. The further rules would include the rule "Judge horses at horse shows, but not at dog shows." But then we would need a further set of rules governing when and how to apply the rules of judging when and how to apply the rules of judging horses. *Ad infinitum*. Green seeks to avoid the regress by the seemingly innocuous statement: "part of what is involved in learning to follow a rule is . . . the capacity to discriminate . . . in what circumstances the rule can apply." He mentions De Morgan's theorems* (a disingenuous move: relatively few readers will be familiar with the rules for translating conjunctions into alternations and vice-versa in formal logic) to illustrate his point. The giveaway, however, is in the very odd-sounding expression "learning to follow a rule." One learns a rule, or one follows a rule. But learning to follow a rule in Green's sense, i.e. with discrimination, acumen, and freedom, is a more complex affair, governed by higher order rules which are structural to the whole enterprise of life. To follow Green's example, learning

¹ John R. Searle presents a two-level distinction of orders of rules in his "How to Derive 'Ought' from 'Is'." *The Philosophical Review*, LXXIII (January 1964) pp. 55-58. The distinction is valuable but not exhaustive.

* Editor's note: DeMorgan's theorems state: (1) "not (x or y)" is logically equivalent to "(not x) and (not y)"; (2) "not (x and y)" is logically equivalent to "(not x) or (not y)."

how and when to translate, say, Xville High School's "Our Philosophy" into standard logical form so that De Morgan's theorems can be applied is *not* "just part of what is involved in learning . . . (or "learning to follow") De Morgan's theorems. The former involves a different *order* of rules.

On further reflection one wonders whether the notion of "rule" is really adequate to the task of explicating all the different sorts of norms that guide human action. One can easily see why Green uses "rule" as the key term in his argument: First, the term "rule" has such neat paradigm cases in the rules of games. Thus when Green wishes to distinguish between "knowing" and "having learned," he can easily find a case which will force us to grant that "knowing a rule" applies, *viz*, the case of playing a game according to the rules; it is a paradigm case. (This is not to say that I approve the use Green makes of his example. If I were forced to explain the phenomenon of a "child of ten months who . . . begins to play chess like a master," (p. 512) I think I might prefer to say that his *learning* was miraculous, not that his knowledge of the rules of chess was innate. But I don't know: if the child really demonstrated a master's knowledge, on Green's analysis, i.e. if he clucked approvingly at his opponent's coup and grunted critically at an inconsistency in his own play, in sum, if he showed the critical attitude of an expert, then I simply don't know what I would say. But the fact that Green can *name* an imaginary event "a child of ten months . . . begins to play chess like a master" doesn't prove anything; especially it doesn't prove the logical independence of "knows the rules of the game" from "has learned the rules of the game." But the point is in irrelevant to Green's main thesis in any event.)

Second, taking the notion of "rules" as central to his analysis gives Green an opportunity to emphasize his predilection for the "norm creating" aspect of human action. For surely the rules of games are human creations. Men choose to play or not to play, and loyalty to the rules, which in all games are essentially arbitrary, is the *sine qua non* of "playing the game." But whether the game is an adequate paradigm for "norm-directed" action *in general* is quite another question. I do not believe it is. Moral principles, among other things, are not arbitrary in the same way as are the rules of bridge. Thus moral commitment in the larger affairs of life is more a matter of cognitive thought than emotional loyalty, more of the head than the "bowels."² The point cannot be pursued here, but this is enough to indicate reason to doubt that Green's reliance on the notion of "rule," the paradigm cases of which are found in games, will serve when we turn to the analysis

² For an over-emphasis in the other direction, see the analysis of "commitment" as a purely cognitive affair in S. T. Kimball and J. E. McClellan: *Education and the New America* (New York, 1962) Part II.

of teaching and learning moral principles, legal codes, the laws of logic, scientific procedures, and esthetic preferences.

The existential problems of teaching and learning norms, especially in our age of change and conflict, demand that we at least make a stab at clarifying these various orders of norms. Whether he likes it or not, *that* is the program to which Green's article commits him. (Note the non-gut sense of "commitment.")

THOMAS F. GREEN
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It will be helpful to place my comments in some perspective. It seems to me that the fundamental philosophical problem of teaching, if not of education itself, is to understand the relation between thinking and acting. I believe also that the respects in which this relation is most relevant to teaching are displayed more clearly in some things men do than in others. Some things men do are done out of "blind" habit, emotion, impulse, or as a consequence of conditioning. In education, or at least in teaching, we are not concerned simply to shape behavior, but to shape it in accordance with certain principles or rules of action; and not simply so that it accords with such principles or rules of action, but so that it expresses obedience to them. In short, I believe it is in norm-regarding behavior that the relation between thinking and acting is most clearly displayed and is most clearly related to the conduct of teaching. Man is a thinker and an actor. What is important is not simply that what he does can be molded and shaped, but that it can be rule-governed; not simply that it can be explained but that it can be undertaken for some reason. What is important is not simply that he behaves but that he acts, i.e., his behavior can be norm-regarding. There is a sense of "conduct" in which a newly born infant can be said to behave well, but cannot be said to have good conduct or to conduct himself well. This difference of *emphasis* is what I have in mind by marking a contrast between acting and behaving.

Such a view does not imply that teaching or education is concerned only with the creation of norm-regarding behavior. Neither does it mean that every thing a man does should be norm-regarding or that there is no middle ground between norm-regarding behavior and impulsive or blindly habitual behavior and the like. Nor does it mean that men should never act out of impulse, habit, strong emotion or sentiments of affection and preference. It means simply that we cannot hope to attain any solid understanding of teaching or of education without coming to grips with the relation between

thinking and acting *as it is displayed in rule-guided behavior*, and moreover, that we must come to grips with this matter in a way rather alien to the methods and language of psychology and sociology in order to understand it. The general problem, therefore, is to understand the relation between thinking and acting. The particular problem is to understand the relation between behavior on the one hand, and the rule, principle, policy or maxim which guides it or governs it. What do we mean in this context by "guide" and "govern?" What is it that renders behavior norm-regarding?

With this preliminary, I shall comment on the remarks of Professors McClellan, Soltis and Peters in what appears to me the ascending order of their importance. Peters objects to certain views which I do not hold and to others which I do hold, but not in the form in which he states them. He says, "It would seem very odd to use the concept of 'behavior' in such a way that actions are ruled out as being forms of behavior." I agree, but such a view is neither contained in nor implied by what is said in my paper. My intention was never to deny that rule-guided behavior is behavior. The fact is, however, that when we describe it as *behavior*, it is not its feature as rule-guided to which we have reference. Everything men do can be regarded as behavior, and as amenable to law-like explanation—a fact I admitted prior to Mr. Peters' pointing it out. But what is interesting about rule-guided actions is not their character as behavior, but their character as being "governed" by rules. Precisely because I did not wish to "demarcate the concept of action," a task vastly more complicated, I adopted a certain convention concerning "a possible contrast between acting and behaving." (p. 509) There is nothing in this convention, namely that actions are norm-obeying and behavior norm-conforming, which would imply that these contrasting concepts are either exhaustive or mutually exclusive. McClellan saw this clearly; Peters did not see it at all.

As I have already pointed out, moreover, the convention I adopted is not without considerable basis in ordinary discourse, although to make this point clear and persuasive would require more space than I have. It may be risky to adopt such conventions in philosophical discussion, but the risk is always in proportion to the perspicacity of one's reader.

Professor Peters also objects to the view that habits are to be viewed as "behavior" and therefore opposed to "action." I hold to no such view in the sweeping sense in which Peters puts it. I made explicit reference to "habits of obedience" as instances of actions, i.e., as norm-regarding behavior. Peters says, "we can only call something a 'habit' if it is the sort of thing that we could in principle, have reasons for doing. . . ." He has in mind habits as contrasted with such things as heart-beats, reflexes, stomach-aches and the like, for which one could not in principle have a reason. I would agree and

add, however, that though a habit is always the sort of thing for which, in this sense, I *could have* a reason, it is, in another sense, the sort of thing for which I *could not* have a reason. A habit is often the sort of thing that one *discovers* even with astonishment, that he has. For example, on hearing a recording of one's own voice, one may be amazed to discover that he has the habit of slurring certain sounds. Now slurring speech is the sort of thing for which one *could* have a reason. But some kinds of reasons, if offered, e.g., "I was trying to mimic Caldwell," would count *against* our saying the slurring speech was habitual. But if it turned out that he has no reasons, can give none, and always or nearly always speaks thus, then that would tend to confirm that his slurring speech is habitual. It makes sense to ask what may be a person's reasons for slurring certain sounds in speaking. But it does *not* make sense to go on asking for reasons after it is determined that he has none.

It seems to me that most commonly a person will be able to give reasons for a certain habit of his when he is concerned to explicate or communicate, as a teacher might, the guiding principles in his practice of a certain skill or of a certain activity. For example, a good athlete may do many things by habit of which he is not even aware. But when these habits are called to his attention, he may give reasons for what he does in terms of the standards of performance in the sport in question. This would then be the kind of habit which I called a "habit of obedience," i.e., it is rule-guided. If he cannot give such reasons, then he might well say "It is just a habit," by which he would be understood to mean that there isn't any reason, and that therefore, no reason can be given. In one sense a habit is the sort of thing for which, in principle, a reason can be given. In another sense, it is the sort of thing for which one cannot give a reason and for which it does *not* make sense to ask for a reason. It was in this latter sense that I spoke of *mere* habits as contrasted with rule-guided behavior or habits of obedience. It is in this latter sense that habits are norm-conforming and thus fall into the category of behavior according to the convention I adopted.

There are other remarks of Professor Peters to which the limitations of space will not allow comment. He says that my discussion proceeds from a "confused" philosophy of mind. I am quite willing to admit that I am confused on many points. Anything less in a philosopher would itself be a mark of confusion. But my confusion is not nearly as great as a confused reading makes it appear.

Professor Soltis has produced some interesting and ingenious arguments which go to the heart of the distinctions I was concerned to draw. My comments can best begin with his example of his daughter learning a rule—supposedly in what I called the verbal sense—without learning it in the critical sense. His contention is that he has taught his daughter so that she has

learned that one ought not to use a double negative, although she "cannot make critical judgments with respect to [this rule]."

Soltis is confused as to what he has taught his daughter and what she has learned. She has not *learned that* one ought to avoid a double negative. She has *learned to* "produce the rule on demand," and that is, in fact, the way Soltis describes it. His example does not demonstrate the point he wishes to make. He has confused *learning that* with *learning to*.

His mistake is instructive, however. The distinction between "learning to" and "learning that" has application in two different contexts. In the first place, it applies to the relation between learning a rule and learning to obey it; but, in the second place, it applies in the analysis of the phrase "learning a rule" quite apart from the relation between learning a rule and learning to obey it. On the one hand we must distinguish between *learning that* one ought to avoid a double negative and *learning to* avoid one. On the other hand we must distinguish between *learning to* repeat on demand the rule that one should avoid double negatives, and *learning that* one should avoid a double negative. Soltis' view of *learning that* has no plausibility except in the first of these contexts, but his argument has to do with the second.

Now Soltis regards a person's capacity to state a rule K, as a sufficient condition for saying that he has *learning that* K. He says, "'Learning that' as generally treated by philosophers since Ryle has been taken to mean the acquisition of some proposition or statement which is normally evidenced by the learner's capacity to repeat the statement on demand." Soltis may be correct in saying that this is the sense of "learning that" which has been "dominantly used by analytic philosophers." But the phrase "normally evidenced by" is important. It may be that "learning that" is normally evidenced by the "learner's capacity to repeat the statement on demand," but Soltis takes this to be *sufficient* evidence or the *criterion* for saying someone has *learned that*. On this point he is simply mistaken. It remains a mistake even though it may be "dominantly" held by analytic philosophers.

Attend now to Soltis' first point. I presented an argument, almost in passing, as follows: "If someone has learned to obey a rule K, then *in some sense*, he must have learned the rule." The emphasis is on the word "obey." Learning to obey a rule, as contrasted with learning to conform to it, would require a variety of accomplishments including the capacity to make critical judgments in one's own case and in others with all that that implies. Suppose a child learns to obey the rule that one should avoid double negatives. He corrects his own speech as the rule would require, regards violations of the rule as incorrect, and so forth. It seems to me quite correct, under these circumstances to say that he has *learned that* one ought to avoid double negatives. It would seem fatuous to deny this *even though he cannot state the rule*. We

can say, in one sense, he has *learned that* one should avoid double negatives, although, in another sense, he has not learned *the rule* that one should avoid double negatives. But on the other hand, we can say *he has learned the rule*, although he does not know the rule he has learned. We may even say he is in a position to formulate *the rule he has learned*.

These seem to me rather odd conclusions. I do not know what is the correct analysis at this point. But it seems to me undeniable that there is a powerful pattern of thought leading to the view that if someone has learned to *obey* a certain rule, then in some sense he has learned the rule.

I think Soltis has failed to see the power of this chain of thinking for two reasons. In the first place, he has failed to appreciate all that is involved in the phrase "learned to obey" as opposed to "learned to conform." But more importantly, he has taken the distinction between "learning that" and "learning to" to be strictly isomorphic with the distinction between the verbal and active sense of having learned a rule. It seems to me now, however, that Soltis has prompted me to consider a genuine case of *learning that* in the active sense. This suggests that there may be both an active and a verbal sense of "learning that" in which case the distinction between "learning that" and "learning to" is not strictly parallel to the distinction between the active and the verbal senses of learning a rule. This seems to me peculiar; it runs counter to what I would expect. If it is so, I do not understand why it is so.

Soltis attacks another argument of mine. I argued "If we are to say of someone both that he knows a certain rule on the grounds that he obeys it, and also that he did not learn the rule, it would follow that he did not learn to obey the rule." The argument is fallacious. Suppose someone invents, say, a certain clinical procedure in medical diagnosis. In one sense of "learn" we might say he learned what rules of procedure are involved. In another sense, he did not learn them; he invented them. We may say that he knows the rules on the grounds that he obeys them, that he did not learn them, but invented them; yet it may be the case that he had to learn to obey them—*non sequitur*.

McClellan's comments seem to me penetrating, accurate, and useful. He claims that I have not recognized the importance of hierarchies of rules and that consequently I am left with the "unanalyzed notion of 'critical attitude' as the mark of having learned (or learned to follow) a rule and that, in turn, [has left me] with nothing but a gut theory of commitment and loyalty."

A more complete analysis than I have given would recognize differences between rules, maxims, principles, policies, customs, mores, the defining features of practices, rules of thumb in the exercise of skills, and so on. I am not unaware of these distinctions. But the problem is whether in the logical features of these distinctions there is included a different relation between rule-governed behavior and the rules which govern. There are distinctions be-

tween rules, mores, maxims, policies and so forth. But the distinctions are not usually made at this point.

McClellan says, "I suspect that further analysis would reveal sharp differences in the sense of 'teach' and 'learn' appropriate to different orders or grades of rules. . . ." I am convinced that he is correct in some respects, but not in others. Consider the principle (as opposed to rule) that rules of action require similar action in similar cases. This is one of those principles which, according to McClellan, have to do with the "structural necessities of thought and action itself" and which therefore, are of a "higher order." By saying this principle is a part of the "structural necessity" of norm-regarding behavior, he means it is expressed in all norm-regarding behavior whatsoever because without it no behavior can be norm-regarding whatsoever. In what sense then, does this mean that it is a rule of a higher order? It is not something one has to learn either *in addition to* learning rules of a lower order or *in order to* learn rules of a lower order. It is "structurally necessary" only because it is part of what is learned in learning *any* rule. In this sense, it is not a rule of action at all, but a statement of the conditions necessary for there to be any rules of action and any rule-governed actions. Accordingly, it may be obvious to McClellan, but it is by no means obvious to me that this principle is learned in a different sense of "learn" or taught in a different sense of "taught." It is clear, however, that this kind of principle is related to norm-regarding behavior in a way different from particular rules, maxims, policies and so forth. It should be clear from these remarks that I did not leave the notion of "critical attitude" unanalyzed. Part of its analysis consists in elucidating just the principle I have been discussing.

I must add one final comment on the closing section of the paper with its allusions to commitment and loyalty. It is an unduly stern and moralistic view which sees education as concerned primarily with obedience to rule. It seems to imply a stultifying devotion to the *status quo*, a deadening kind of conservatism. Yet the relation between thinking and acting is displayed as much in rebellion and in the invention of standards and rules of action as in obedience to those that already exist. But what can it mean to speak of the standards and rules of action "which already exist"? I was concerned to hold that rules of action exist with some practical social consequences, not in some pie-in-the-sky sort of way, but only to the extent that they are made concrete in what men do. In the first sections of the paper I was concerned with the sense in which rules can be said to govern behavior; in the last section I was concerned with the sense in which actions themselves create the rules that govern. The term "norm-regarding" was carefully selected for its ambiguity precisely to express these different aspects of the same general problem. By "norm-regarding" one may mean either norm-obeying or norm-creating.

I was not, as McClellan suggests, concerned with giving an existentialist exposition of human freedom any more than I was concerned with giving an exposition of the conditions for human slavery. Freedom exists just to the extent that there are institutions of freedom among men, or men, who lacking such institutions, rebel against what they have and in this way bring it into existence. I see no point in speaking of justice apart from the institutions of justice and the acts of men whereby the principles of justice are made concrete. It seems to me, beyond any doubt, that the law of God, as a humane and reasonable religious man might view it, is a mere curiosity in the world except to the extent that people take it seriously; and it is this, quite apart from its truth, its validity or its authority which makes it a thing of consequence in the lives of men. *In that sense*, even the law of God, *as law*, is created by men through their actions as norm-regarding. It seems to me that the same can be said of the myriad of other contexts to which I alluded in which norm-regarding behavior is recognized.

It was in this context that I spoke of *accepting* rules or principles as valid rather than what *makes* them valid or binding. I do not know whether men will die for the truth; I am not sure anyone ought to; but I do know some have died for what they believed to be true, and that fact is of immeasurable importance in creating the standards of conduct and practice and the images of life which we know. I did not, therefore, suggest as Soltis thought, that accepting a rule of action as binding is part of the criterion for saying someone has learned to obey a rule. I said instead that it was a necessary condition for the rule or related practice to have any "worldly existence." The point seems to me quite beyond question and properly expressed in terms of commitment and loyalty. By speaking of the reality of rules of action *in this sense* I do not suppose the concepts of "fidelity" and "loyalty" have their primary meaning in this context. On this point, again, Professor Peters is very far from hitting the mark.

The sense in which McClellan speaks of commitment is the sense in which, if one accepts the premises of a valid argument, he is committed to accepting the conclusion. In this logical, "non-gut" sense of "commitment," I am committed to precious little. This is a sense of "commitment" in which my point could not be made. But neither is it the sense in which McClellan himself has written about commitment in *Education and the New America*. The sense in which I did mean it cannot be made clear in the space available. Suffice it to say that I find McClellan's "other view" the most sensible I know of, and not at all incompatible with my own intentions.

The Editorial Board welcomes comments on articles, reviews, and letters that have appeared in the REVIEW. Communications should be addressed to: HARVARD EDUCATIONAL REVIEW, 13 Appian Way, Cambridge, Mass. 02138. Letters from readers will be published, or printed in part, at the Editors' discretion.

To the Editors

INDIAN WRITING IN ENGLISH

To the Editor:

I was very interested to read the informed and balanced article on "Indian Writing in English" by P. Lal (HER, Spring, 1964). Few readers, who are at all acquainted with the contemporary trends in this field, would have reason to quarrel with his main conclusion that Indian writing in English had come of age and that there are in it ample signs of mature responses which are truthful and significant. No longer could the Indian *cognoscenti* afford to damn it with faint praise or look on it with amused boredom as an innocuous oddity like a bear dancing, a woman preaching or a girl smoking. The attitude in more recent years has been one of sullen contempt and studied indifference from one side and of determined hostility from the other. The first is more characteristic of those who claim to be lovers of English literature, pure and undefiled, and the second of the champions of Indian Literature undiluted, by which is meant the literature of the

Indian languages. An intelligent response, based on understanding and sympathy, has long been conspicuous by its absence. The times are fast changing, however.

It is not surprising that Mr. Lal, a practising poet himself, has devoted the best part of his article to a discussion of the contemporary poets, whose works he happens to know rather closely. I, for one, would wish that for giving a comprehensive picture of the subject, though in miniature, a reference had been made to other branches of writing like the short story and longer fiction, biography and autobiography, the personal essay, *belles lettres* and literary criticism. *The Autobiography of an Unknown Indian* by Nirad C. Chaudhuri, published over a decade ago, ranks next only to Nehru's *Autobiography* (and *The Discovery of India*) in its depth and sweep as a literary masterpiece. Its unorthodox approach to some of the generally accepted values of life might irk the conventional reader, but none can deny the compelling

originality and refreshing candour of the non-conformist mind at work behind the *magnum opus*. A few biographies (e.g. B. R. Nanda's work on the Nehrus) have been appearing in the English language, which mark a clear departure from the hagiography so familiar too in the stories of the lives of Indians, great and not so great. Among works of fiction, mention was made of Raja Raso's *The Serpent and the Rope*, which is a novel of major significance in its attempt to grapple with the imponderables of the Indian tradition. The sly, gentle, urbane satire of Ruth Praver Jhabvala (in her engaging pre-occupation with the social life in Delhi) and the salty wit and sharp insight of Kamala Markandaya (inner depiction of the East-West encounter) draw attention. There is at least one considerable essayist of the South, Mr. N. Raghunathan ('Vighneswara' of *Sotto Voce*) who should be better known inside this country and abroad, as a stylist and satirist, in spite of his tradition-bound outlook on the problems of modern life. The short stories of Manjeri S. Isvaran (excellent in form and content) and the vignettes of K. S. Venkataramani are indispensable in a literary pilgrimage to the south of India. The substantial work in criticism of Dr. K. R. Srinivasa Iyengar (the historian of Indian writing in English) is being ably supplemented by the monographs on individual writers by Professors C. D. Narasimhaiah and P. E. Dustoor, among others, besides reviews and critical articles in the periodical press by conscientious students of Indian writing in English.

It is high time that the serious reader and the literary critic, at home and abroad, shed his prejudice against Indian writing in English. . . .

D. ANJANEYULU
Madras, India

A COMPUTER-MEASUREMENT SYSTEM FOR GUIDANCE

To the Editors:

William W. Cooley (HER, Fall, 1964) will find little disagreement with the suggestion to use computers for the purpose of compiling and storing information about students in order to relieve counselors from such clerical tasks. But what a revolting thought that personal decisions of students will be made on the basis of *types of plans* and *kinds of people* simply because some statistic indicates a general likelihood that they should behave in the suggested fashion.

It is painful to think how fast and quietly the forces of education, business, and government are easing into an extermination of the uniqueness of personal judgment and other inner forces of man which appear to make him human in reaching a choice. More and more the machines are making decisions for more and more Americans because it is more economical, consumes less time, handles larger numbers, and makes far fewer errors than man. . . . But are we creating a state where only the elite and machines will be permitted to make proper choices? If so, why bother with guidance counselors in the first place? Certainly, it should be far more efficient to program all information about a student into a computer, then build-in a punch-it-yourself key in order for the student to obtain answers about himself each Friday. . . . The week-end should provide enough time for parents to punch this data into their home-computer to obtain the desired answer. Oh, but wait, we need to build a test to get parents' norms to see what kind of answers are being accepted these days by such parents—and now we are prepared to run multi-correlations to compound the idiocy. . . . I hope the majority of people in

Guidance never becomes so preoccupied with measurement that they permit a statistical estimation to dominate or obscure the essence of the human personality in counseling. Most students are being overwhelmed daily with the notions of "best answers," "facts," "the book says," and other forms of conformity in the classroom; therefore, would it not be expedient to reserve one place in the school where the student is allowed to behave in a be-yourself manner?

The approaching *Brave New World* frightens me. Please, you all, HELP!

PAUL M. SMITH, JR.
North Carolina College at Durham

SECOND THOUGHTS ON CONCEPTS, CURIOSITY AND DISCOVERY

To the Editors:

Dr. Friedlander's thoughts on concepts, curiosity, and discovery in teaching and learning (HER, Winter, 1965) strike me as being extremely sensible. Having already typed Dr. Friedlander as an experimental and not an educational psychologist, I was particularly appreciative of his final comments which endorse an often quoted position of the modern educational psychologist (who is often found doing the work of an "instructional engineer"). That position is that TV, programmed texts, and other devices do not replace the teacher, they emancipate him. Even an instructional engineer could not have pointed out so clearly and convincingly that the teacher has a unique role to play in instruction beyond that of the "information dispenser."

However, after reading Dr. Friedlander's article I had difficulty trying to reconstruct from his comments exactly what the unique role of the teacher should be. The teacher's role has al-

ways been to guide the learner, but now the instructional engineer is devising man-machine systems which often expand the teacher's capacity for guiding the learner. Is the unique role of a teacher to be defined simply in terms of that which a machine cannot do?

One answer to my question, I believe, is suggested in another thought Dr. Friedlander expressed. He wrote that learning "major conceptual schemes" may require prolonged preparatory experiences which for the learner may appear isolated and meaningless, and which often may be learned in a purely mechanical way. I interpreted his comment to mean that investigations of learning seldom take into account the extremely elaborate preparations which the classroom instructor typically makes over long periods of time (months and years, not days and weeks) before expecting the learner to arrive at significant insights and generalizations, or to be able to employ effective techniques of problem solving and reasoning. Dr. Friedlander appears to be arguing for a re-examination of the importance of learning rudimentary facts and skills on the grounds that such incidental learning is prerequisite to the attainment of more complex intellectual skills. There is yet another stage in learning, which Professor David Hawkins at the University of Colorado refers to as the "harvesting" stage. The learner reaps the harvest of his preliminary learning experience when previously meaningless learnings are reorganized and structured in meaningful arrangements; and when the learner becomes self-critical and capable of pursuing a line of study independently and creatively. Perhaps the unique role of the teacher is to help the learner reap the harvest of his preparatory experiences. If the instructional engineer can analyze the complex intellectual skills about which Dr.

Friedlander wrote, identify the component learnings and experiences, and then systematically "engineer" the instructional systems and materials so as to relieve the classroom teacher as much as possible during the preparatory stage, perhaps the unique role of the instructor as educational "harvester" will become increasingly more apparent.

The effective study of the preparatory stage for conceptual learning may require techniques of observation which will bring the scientist together with the practitioner in the ongoing instructional setting of the school classroom. The adoption of somewhat different research techniques does not necessarily mean the abandonment of time-honored experimental designs and methods of quantitative analysis. These same techniques are the foundation upon which modern educational technology is based. Rather, it may mean that present day school practices and policies will need to be made more flexible and adaptive to experimental constraints, and classroom instructors may need to meet the behavioral scientist at least halfway by learning to translate the language of the pedagogue into behavioral terms. It is almost inevitable that such a rapprochement of teacher and researcher will lead to a more systematic study of long-range objectives to the point that even curriculum planning will become an engineering science.

In the final analysis, it may well be that during the harvesting period learner differences will be so pronounced that effective prescription of instructional sequences and materials will be difficult, if not impossible; and a human teacher will be required, as Dr. Friedlander suggests, to sense the student's changing needs and to guide him "through the trials and dependen-

cies that inevitably accompany the uncertainties of attaining intellectual maturity."

BERT Y. KERSH
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Oregon State System
of Higher Education*

ADMINISTRATOR, ADVOCATE,
OR THERAPIST?

To the Editors:

After sipping the heady brew of the *Harvard Educational Review's* Special Guidance Issue (HER, Fall, 1962) late into the night, try Professor Lortie's paper, "Administrator, Advocate, or Therapist?" (HER, Winter, 1965) to sober up the next morning. Lortie has discussed three alternative routes by which the occupation of school counseling might become professionalized. Irrespective of whether counseling is already a profession, about to become one, or never will, one of his points should be salient in the minds of those engaged in the practice of guidance and in the operation of schools: guidance activities, directly concerned with the inner life and psychological development of children, have important implications for the distribution of labor and power within schools and for the relationship between schools and surrounding social institutions, such as the family, labor market, institutions of higher learning, and so forth. The point seems obvious enough, but one must look mighty hard to find any penetrating discussion of the non-psychological implications of this work whose technology is primarily and justifiably psychological. Lortie's raising of these issues is an important contribution.

When a writer has explicitly limited the scope of a paper to include only certain problems, there is a question of

whether it is fair game to criticize because problems of interest to the commentator have been left out. I offer the following remarks, therefore, in the spirit of advancing the argument.

In regard to the process of professionalization: I have no quarrel with the importance that Lortie attributes to the definition of core skills, (p. 4) control over admission, preparation for practice, and compliance with standards of conduct. (p. 5)¹ One problem in the professionalization of any occupation is whether its members can gain sufficient independence from interested parties so that they can define their own jurisdiction and maintain their own occupational standards of what constitutes good practice. If in the practice of guidance the counselor and the student comprise the basic working unit, teachers, school administrators, and parents will have important stakes in the proceedings.²

If these interested parties raise questions about the desirability of guidance services or about the premises governing the practice of counseling and have the power to make their judgments stick, then the prospects for professionalizing the occupation do not appear overly optimistic. Unlike medicine, law, and architecture, occupations in which the activities of solo practitioners were professionalized, school counseling developed in an organizational setting where the premises of teachers and administrators had temporal priority. The problem for counseling is to carve a niche out of an existing edifice, not to

protect an existing tradition of individualistic practice. In this sense, the position of counselors is analogous to that of nurses and pharmacists—skilled as they are—who act at the behest of physicians, and to that of teachers who act to a considerable extent at the behest of school administrators. Not surprisingly, there have been problems of professionalization in the occupations of nursing, pharmacy, and teaching. Thus, although the problem of defining core skills is crucial, gaining occupational autonomy is equally so, and perhaps more difficult to accomplish in the case of guidance.

Lortie is not completely clear about whether counselors must choose but one of the three activities if they are to become professionalized, or if some combination of the three, as long as they are clearly defined, can constitute the core. Of the three, however, advocacy appears the least tenable. The dangers of crushing children in the bureaucratic gears of the school are real enough; if the counselor can support their case, so much the better (although as advocate, the counselor appears to me more as attorney for the plaintiff than for the defendant [p. 11]). To professionalize the counselor's job, however, around the task of advocacy—to make this the core of his work—looks to me like the road to chaos. What shall he do when the defense of two children with distinct problems requires contradictory administrative solutions? Advocacy might better be construed as a weapon to be used with great care in the service of administrative and/or therapeutic objectives as the case demands. Should it become the central task of guidance, the counselor would indeed require protection (p. 11), but so would the school.

¹ Lortie mentions other aspects of professionalization, (p. 4) but the main line of his argument is based on the four listed here.

² In some communities, guidance has been considered one of the so-called educational frills; hence, vulnerable to political attack, and a target of budget-choppers.

ROBERT DREBEN
Harvard University

To the Editors:

The clear analysis of counseling functions in Professor Lortie's article is challenging, and should prove helpful to counselors in examining their work roles and their objectives. It resembles in important respects the analyses made by others who have looked at the work of the counselor, it sharpens the issues more than has generally been true, and it runs some risk of making things seem clearer, simpler, and more conflicting than they may in fact be.

On the first point, the extent of agreement among observers of the counselor's function: more than thirty years ago Leonard Koos and Grayson Keffauver, in a book on *Guidance in Secondary Schools* (New York: Macmillan, 1932), identified the *distributive* and the *adjustive* functions of the counselor, the former resembling Professor Lortie's administrative and the latter his advocacy and therapy functions. More recently Robert Mathewson, in the latest edition of his *Guidance Policy and Practice* (New York: Harper and Row, 1962) has identified three roles, the *directive*, the *adjustive*, and the *developmental* as characterizing the work of counselors and the emphases visible in the writings of specialists in guidance. Mathewson thus recognizes Professor Lortie's *administrative* and *therapeutic* roles, considers the *advocacy* role one which guidance itself has actually rejected (although it may at times be played by counselors who have not developed a clear concept of their roles), and identifies another and, in his judgment, most important role, that of *facilitating development*.

The developmental function is, I believe, distinctive, although it might also be conceived as consisting of a therapeutic approach to the directive or, as Professor Lortie calls it, the administrative function. In this formulation, the

counselor's function is to help the student to understand himself and his environment, and to use available resources for optimal development. The synthetic role, I would suggest, is more valid than are the purer roles identified in Professor Lortie's paper, just as water is a more valid drink for man than is either of its components. The fact that water can be broken down into hydrogen and oxygen does not mean that we should always, when thirsty, decide which of the two we need and insist on being served one of them in its pure form.

Herein lies, I believe, the serious danger of the sociological analysis of functions: the fact that they can be identified, even the fact that they are sometimes incompatible, does not necessarily lead to the conclusion that they should be separated. Mothers comfort, direct, and discipline, but society has tended to settle for one multifunctioning mother rather than for several special-function mothers for a given child!

As Professor Lortie points out, there are serious risks in the process of professionalization. Decisions concerning functions, as well as decisions concerning training, can be made too early or too late, with too few data, or on the basis of apparent logic which fails to take into account other important logical considerations. It is useful to identify functions, to raise questions concerning them, to point out possible consequences of performing them, to suggest that some of them be examined from certain points of view. This paper does this, most helpfully. But it has not identified at least one major function, which may be a synthesis of two which the author does identify. This synthesis is one which not only Mathewson, but others such as Leona Tyler and the Pepinskys, have described in their writings, and which many of the better

trained and more insightful counselors seek to implement. In seeking to clarify counseling functions, let us avoid the dangers of oversimplifying. The answer to Professor Lortie's question might be "all three"!

DONALD E. SUPER
Columbia University

THE SCHOOL & SELF UNDERSTANDING

To the Editors:

It is not difficult to agree with Dr. Samler's objective (HER, Winter, 1965): that of self-understanding. If we think of a theory or a conceptualization as containing means-ends relations, then I can agree with the ends; but I find some reasons to attempt to supply different means. I might add in further exemplification that the Wisdom of the Ages supplies us with excellent ends—indeed, most of our broad ethical principles are based on fairly well agreed upon ends—but fail to give support to particular sets of means. And so it is with Dr. Samler's article.

Dr. Samler takes two stands with which I am inclined to disagree, not out of any failure to appreciate the relevance of his stands but out of some preferred alternatives. He says that *self-understanding* is a precondition for making mature choices, for assuming responsibility. Here is an issue laden with theoretical and empirical problems, and I cannot hope to do more than highlight their importance.

The second issue of means is in regard to the use of cognitive techniques to promote the desired states of self-understanding and responsibility. Here, too, is an opportunity for an alternative position. I shall discuss both of these (self-understanding as a precondition for maturity, and the use of cognitive techniques) in the same context.

It is entirely possible that notions like self-understanding, maturity, responsibility, etc., have their most specific and cogent locus in actual behavior, not in terms of mental states or subjective evaluations; although the latter conditions certainly *accompany* the behavioral referents. Consonant with this notion of the *behavioral priority* of self-references and self-evaluations is the idea that the only basis for self-appraisal is what one, in fact, does—how he behaves. One can add in rebuttal, that a person has a frame of reference, a set, or an expectancy—all of which may be easily regarded as cognitive states—which serves as a basis of evaluation for one's behavior. That is, the ultimate criterion is a subjective state of approval or disapproval, or feeling of satisfaction, or its lack. Not wishing to engage in an infinite regress, or to imply that this kind of logical analysis is perforce forever incomplete, I risk a further statement by saying that the frames of reference (and their kind) also derive from one's experiences (better, behavior), and from the behavior of others. We really cannot communicate adequately as human beings if we cannot find reference bases in observables for the terms we use.

Dr. Samler passed over the psychoanalytic model in his effort to find a conceptual model for communicating to educators the notions he holds important. (I would agree with him here. The psychoanalytic model has served its purpose in the history of the behavioral sciences and no longer merits viable support.) However, in his emphasis on cognitive concepts, Dr. Samler leaves some problems. Is the school, *vis à vis* mental health objectives, in a position that mirrors the formal therapeutic situation? I seriously doubt it. There must be trust in both situations, but trust must obtain to some extent in any for-

mal relationship from buying a ticket to board a bus to the carrying out of contractual relations with unknown people.

What other elements of the therapeutic situation should become objectives of the school's mental health position? A focus on the "feeling life," Dr. Samler says; and he goes on to discuss the pivotal role of the "feeling life." The obvious reply here is to whether the "feeling life" is the kind of entity implied in Dr. Samler's discussion, or whether it is not a set of summary statements about one's behavior in relation to various demands from the environment, and various judgments about how one faces these demands. Does the "feeling life" have any meaning independent of its objective locus?

Rationality is also a judgmental term; and while we all seek it, there is a lot of room available to those who might seek it differently. If behavioral science can give us both a conceptual position of strength and feasible technology, then we will gradually put ourselves in the position of supplying the needed rationality, clarity of purpose, and self-understanding we all deem desirable. But to consider all these good things as potentially available out of a cognitive emphasis, and to consider the school as a kind of mirror to the therapeutic situation, is pushing the present state of knowledge and skill far beyond its capacity.

One final point which is implied, yet not openly discussed, in Dr. Samler's paper. Even if we had the skill at the elementary school level to promote the mental health measures we desire, how would we export this to other peoples, situations, levels of education? The problem of exporting the good features of the six programs mentioned by Dr. Samler is an enormous problem in its

own right, and one I judge to be well beyond the present scope of behavioral science knowledge. One of the challenges of the present and of the upcoming decades is not only that of producing viable models for limited application in the school, the clinic, or the laboratory (which we have scarcely begun to do), but in learning further how these useful models can be generalized, extended, exported, and applied to new situations. The problem of cultural transmittal of skills and knowledge—not to mention "attitudes"—is very difficult and one to which all the social and behavioral sciences will be devoting much energy. To assume that the therapeutic situation is sufficient is to overwork the clinical model (be it a Freudian model or a cognitive one), and to undercut the vast areas of intriguing problems in the macrocosm awaiting application of knowledge gained at the microcosm.

E. LAKIN PHILLIPS
George Washington University

To The Editors:

People associated with the mental health movement will certainly agree with Dr. Samler that there are strong currents of irrationality in the culture, that the schools' role in combating this irrationality has been excessively modest both in terms of desire and scope, and that schools should provide situations in which self-understanding, the psychoanalytically provided antidote to irrationality, may be achieved. The major contributions of Samler's paper (HER, Winter, 1965) lie in his strategy for achieving self-understanding and the rationale underlying this strategy.

A central point of the paper is that an increased emphasis should be placed by the schools on processes of cognition, i.e., on achieving intellectual under-

standings of behavior. Currently the emphases are Rogerian and watered down psychoanalytic analysis "which run counter to the use of rationality and cognition," and which focus on the feeling life. Samler indicates that Freud had little respect for the power of the ego in his theoretical formulations, and that the Neo-Freudians subordinate cognitive functioning. However, his review of the literature suggests that cognitive approaches to fuller development of the self are increasing in importance.

This distinction between cognitive and effective functioning should be examined. As Samler indicates in a different connection, the organism functions in a unitary fashion. It would follow that cognition will be involved in the experiencing of emotion, at least after infancy. It would seem also that systems of psychotherapy which utilize interpretation as a principal therapeutic device are utilizing the cognitive potential of their patients, no matter what their theory may indicate. If one's current relations with women are complicated by an unresolved Oedipal situation, and the therapist points this out, whether he uses the designation Oedipal or not, there is an obvious appeal to the patient's conceptual competencies.

In completing that research of mine which Samler mentions¹ I reviewed the literature which purported to help people understand themselves and function in more effective ways. I discovered a mountain of popular non-fiction which I would characterize as cognitive in approach. The emphasis in the literature prepared by professionals also appears to be cognitive, at

least as I understand the term. Texts or treatises on problems of adjustment used at the college level or directed at the interested layman usually present a theory of human behavior which the reader, it is hoped or assumed, can apply to the solution of personal problems and to the enhancement of his current living. The work of many respectable professional psychologists and psychiatrists falls into this area. Lindgren,² Jersild,³ Strecker and Appel,⁴ and Travis and Baruch⁵ are examples. What was lacking in these volumes, as I saw it, was a plan whereby individuals might, in effect, use their cognitive competencies to bypass the ego defenses and reach to the unconscious, to the non-rational, non-logical world of feeling, and the thoughts and events associated with these feelings. However, there were a few who attempted to equip their readers with the prying techniques of the clinic, and to help them touch the unknown portions of the self, a procedure which I see as essential to any program aiming for significant self-understanding. The social scientist Harold Lasswell⁶ has been advocating for years the mass dissemination of insight-providing techniques. He has pointed out that conventional logical

² Lindgren, Henry Clay. *The Psychology of Personal and Social Adjustment*, New York: American Book, 1953.

³ Jersild, Arthur T., *When Teachers Face Themselves*, New York: Bureau of Publication, Teachers College, Columbia University, 1955.

⁴ Strecker, Edward A. and Appel, Kenneth H., *Discovering Ourselves, A View of the Mind and How it Works*, New York: The Macmillan Company, 1943.

⁵ Travis, L. E. and Baruch, Dorothy W., *Personal Problems of Everyday Life*, New York: Appleton-Century-Crofts, 1941.

⁶ Lasswell, Harold D., *Power and Personality*, New York: W. W. Norton, 1948.

¹ Peck, Bernard. *Effect of Self-Observation upon Self-Awareness: an Exploratory Study*. Unpublished Doctoral Thesis, University of Maryland, 1957.

thinking is not the only method for apprehending reality, particularly the reality of the self, and he points to the insights that may be obtained through the use of the non-dialectical method of thinking by free association. Horney⁷ and Dollard⁸ likewise urge the use of free association as a gateway to the unconscious. In my study I asked my clients to concentrate on the detection of the occurrence of anxiety and the ensuing security operations, and also recommended the use of free association, marginal thinking (the identification of thoughts that creep into the periphery of the mind which are not germane to the activity underway), dreams, and day dreams. Such behavior was systematically recorded, a procedure suggested by my experience with the Maryland Child Study Program. These self-records were then analysed in an effort to identify patterns of behavior and their underlying motivations. Each participant had been provided with material I had prepared identifying guiding principles and procedures for self-observation. They also were provided with periodic comments and a final interpretation by correspondence. As Samler indicates, a degree of success was achieved, and I therefore recommended, among other things, that educational systems experiment with this method of self-study, both with respect to youngsters and to teachers. This has not been done, but I have worked with college students since then, apparently with some good results.

I have been indicating so far that people can be taught a theory of personality and equipped with techniques for reaching the unknown self. But I have been emphasizing the importance

of feeling, the unconscious, anxiety, ego defenses, etc., and suggesting the need for cognitive processes to be used in the pursuit of affective goals. I must confess that I cannot tell from the article whether Samler would find this last statement congenial. On the one hand, Samler emphasizes cognition and seems to reduce the importance of the affective life. On the other hand, his examined life includes the use of dream analysis, the royal road to the unconscious. Further, he uses Sullivanian notions of anxiety in his own teaching and states that in the teaching of behavioral dynamics these dynamics should be made relevant to the individual's particular experiences, a process which must have affective elements.

A few final points. In the psychoanalytic situation, the patient's defenses are dissolved, not only through the use of interpretation but also by the respect which is extended him, a respect which enables him to examine the darker, anxiety ridden, recesses of self. Samler's presentation does not take account of the potential value of a relationship of empathy, care, and concern. I would suggest that if the teachers of the dynamics of behavior cannot manifest these qualities in significant amounts in the classroom situation, the entire enterprise will be jeopardized. If these qualities are in evidence, they could constitute possibly the most important single factor furthering constructive behavioral change.

Samler makes a plea that behavior be controlled. The schools, the home, and society have been demanding this routinely. It strikes me that the results have been indifferent, and further, it seems to deny the importance of compulsive behavior, which may be engaged in even when it is legally interdicted.

I do not wish to become involved in

⁷ Horney, Karen, *Self-Analysis*, New York: W. W. Norton, 1942.

⁸ Dollard, John, *Victory Over Fear*, New York: Reynal and Hitchcock, 1942.

an evaluation of the virtue, or lack of virtue, of pre-marital intercourse, but it seems inconsistent for advocates of the examined life to expect the examiners to accept values which are not congenial to many, and whose justification is merely their existence. I refer

here to the quote from Farnsworth and Samler's advocacy of hewing to absolute values.

BERNARD PECK
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Book Reviews

SECONDARY SCHOOLS AT THE
TURN OF THE CENTURY.
Theodore R.Sizer.
New Haven: Yale University Press,
1964, xiv + 304 pp. \$6.00.

Recently, there has been increased attention to the historical background of the American high school. This has been stimulated in part by an interest in how the present secondary school curriculum developed and who is responsible for its non-academic emphasis, which has received critical attention since World War II. A particular concern has been to determine when and why academic scholars withdrew generally from leadership in shaping the curriculum and left the field to professional educators. This concern has focused attention on the Committee of Ten which reported in 1893 and the Commission on the Reorganization of Secondary Education which reported in 1918. Both of these committees were established by the National Education Association, but the former recommended an academic curriculum, while the latter recommended a much broad-

er curriculum, with its scope expressed by the seven cardinal principles of education.

Lawrence Cremin described the changes in modern American education in their larger societal and cultural setting in his *The Transformation of the School*.¹ Edward Krug focused directly on secondary education in his *The Shaping of the American High School*.² Gordon Seely studied the NEA committees which were a major influence in changing the high school in his doctoral dissertation entitled, "Investigatory Committees of the National Education Association: A History of the Years 1892-1918."³

¹ Cremin, Lawrence, A., *The Transformation of the School: Progressivism in American Education, 1876-1957*. New York: Knopf, 1961.

² Krug, Edward A., *The Shaping of the American High School*. New York: Harper and Row, 1964.

³ Seely, Gordon M. (Jr.), "Investigatory Committees of the National Education Association: A History of the Years 1892-1918." Unpublished Ph.D. dissertation, School of Education, Stanford University, 1962.

Mr. Sizer's monograph, *Secondary Schools at the Turn of the Century*, is concerned with the *Report of the Committee on Secondary School Studies*, usually known as the "Report of the Committee of Ten," and provides a well-documented description and critical interpretation of the background and setting of the *Report*, the membership and method of work of the Committee which produced it, the *Report* itself, the reactions to it, and its effects. In showing the "profound influence" of the *Report*, Mr. Sizer states that,

For fifteen years after its publication it served as gospel for the curriculum writers of the burgeoning high schools; in our own time it serves as the explicit rallying point for those who feel that our secondary schools have forgotten their central role in training the intellect. (p. xi)

The Committee of Ten was established by the National Council of Education, a division of the NEA, in response to the growing need for a clearer definition of the high school curriculum as an important unit in a national system of education extending from the elementary school through the high school to the college and university.

Some of the ablest educational leaders in the nation participated in the work of the Committee. Its chairman was Charles W. Eliot, President of Harvard. Its members included four other college presidents and a professor who was soon to become a president. The four other members were school administrators, the most distinguished being William T. Harris, U. S. Commissioner of Education.

The first third of Mr. Sizer's book gives the background and setting for the Committee and its *Report*. The classical-humanist tradition, with the theory

of mental discipline, was still the basis for college entrance in the early 1890's. However, the academy had already added practical and modern subjects to the classical curriculum; and the public high school, which had become the dominant institution of secondary education in the United States, had developed as an extension of the elementary school and had a chaotic and unsystematic program of studies. Moreover, the accelerating industrialization and urbanization of the nation was producing a rapid expansion of the high school population and a demand for change in its program.

The demand for change in the high school was recognized especially by many leaders in higher education who saw the need for a better preparation for college and greater uniformity in college entrance requirements. There was a wide gap in systematic preparation between the elementary school and the college. Teachers in the high schools were generally ill prepared, and the students represented a broad range of social and economic status and educational backgrounds. Many students in high school had no intention of going on to college. Only a small but increasing percentage of youth of high school age was in school; and, as Sizer points out, "As a larger percentage of the eligible age group started attending the schools, some change would be necessary in order to meet their particular requirements." (p. 54)

It was in this context that the National Council of Education established the Committee of Ten in 1892 to organize a series of conferences on each of the main subjects which enter "into the programmes of secondary schools in the United States and into the requirements for admission to college." (p. xii) The Committee decided to organize conferences on nine subjects:

(1) Latin; (2) Greek; (3) English; (4) Other Modern Languages; (5) Mathematics; (6) Physics, Astronomy, and Chemistry; (7) Natural History; (8) History, Civil Government, and Political Economy; and (9) Geography including Geology and Meteorology. The conference for each subject was to have ten members, selected from colleges and schools so as to provide a broad geographic distribution. Some of the leading scholars in the country participated in the conferences; for example, C. K. Adams, James Harvey Robinson, Woodrow Wilson, and A. B. Hart participated in the history conference.

The various conferences had their meetings and submitted their reports to the central Committee of Ten under President Eliot. The central Committee then formulated the final *Report*, issued in 1893. This *Report*, which is included in the appendix of Sizer's book, set out in tabular form four "courses" of study with a common core of subjects: (1) Classical; (2) Latin-Scientific; (3) Modern Languages; and (4) English. All four courses provided instruction in language, science, history, and mathematics. The *Report* represented a compromise between the classical and practical traditions. It dignified the modern subjects by raising them to an equal status with those included in the classical tradition. It was recommended that colleges accept for entrance any student who had reached a satisfactory standard in any of the four courses. The point of view of the Committee was that the best preparation for college was also the best preparation for life. As Sizer states it, "Life and college were both best prepared for by a mental discipline developed through the study of the academic subjects." (p. 132)

In spite of its efforts at compromise, the Committee was criticized by the classicists for not including enough

Greek and for the idea that the modern subjects should be accepted on the basis of "equivalence" with the classical. On the other hand, many criticized the *Report* for the emphasis it did place on linguistic studies and its failure to include vocational or practical subjects. The Committee was also criticized by some because it was dominated by college men.

The *Report* was read and discussed widely. It had a profound effect on education by influencing school programs and courses and by exerting "a broad general influence on school policy and the thinking of educators." (p. 183) Even though "in an important sense it standardized the main line subjects in secondary school curriculum," (p. 198) Sizer concludes that "The indirect effect . . . upon general school policy, by contrast, was far greater than its influence on specific curricula." (p. 189) The *Report* set standards for evaluating school policies and sanctioned a limited elective system for high schools. The Committee of Ten, by its example, encouraged the close cooperation of college professors and school teachers which marked the two decades following its formation. The success of the Committee "opened the floodgates for groups studying every nook and cranny of the curriculum." (p. 194)

Sizer's main criticism of the *Report* of the Committee of Ten is that it did not deal with society's impact on the school. It neglected the practical and realistic. "Most important, it lacked foresight: it failed to deal with the crucial issues that affected the schools and would continue to affect them for decades." (p. 144) This criticism is borne out by what happened after 1910 when educational leaders began to regard the *Report* as obsolete and to reject its recommendations and rationale. By that time the student body of the high

school had increased greatly and changed in character, and a new rationale of high school education was developing. The school was called upon to accept new responsibilities. The old theory of mental discipline, with its "transfer of training," was challenged by psychologists. These changes were reflected in the Seven Cardinal Principles and the new program of study advanced by the Commission on the Reorganization of Secondary Education. Educationists, rather than academic scholars, dominated the work of this Commission. Sizer concludes that

The pattern set by the *Report* of the Committee of Ten was broken by 1920 because American society in the twentieth century demanded that its schools fill a wide variety of roles. The four programs recommended by the Ten still had great appeal for college-bound students, but for the vast majority, new curricula based on new goals were designed. (p. 205)

However, as Sizer points out, today a "new orthodoxy" is reaffirming the principles of the *Report*, especially its emphasis on the academic subjects and intellectual training.

Sizer's book is a significant contribution to our knowledge of the *Report* of the Committee of Ten and its effects on secondary schools at the turn of the century. The book is based on a careful study of the sources, and its interpretations and generalizations are well substantiated and balanced. It needs to be recognized, however, that it is difficult to determine the effects of the *Report* on pupils and on American culture generally through reliance on documents. Sizer's narrative style is clear and interesting. It is to be hoped that his book will be read widely as a contribution to an understanding of how the contemporary American high school has

reached its present stage of development.

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GREEK EDUCATION 450-350 B.C.

Frederick A. G. Beck.

New York: Barnes & Noble, Inc.,
1964, 381 pp. 24 plates. \$8.50.

Many believe the Greeks had a poor sense of history. And for a good reason. They idealized their past, they were parochial about the events of their times, they hoped the future would repeat events of bygone days. History, they thought, displayed no progress. The only certainty was cyclical repetition. An outlook such as this inevitably left its mark on Greek thought. Modern historians attempting to reconstruct it face a dilemma. If they tell a story of development, they strip Greek thought of its appeal to reason and truth. If they offer a formal analysis, they sever Greek thought from the events that caused its growth and decay. Experienced historians bypass the dilemma by blending the standards of the two approaches. Not so, however, the less-prepared ones. Mr. Beck's present study is a case in point. It proposes to be a history of Greek educational theory and practice, but instead it turns out to be a confusing commentary on educational ideas, held together by mere chronological order. He squanders in digressions and irrelevant details the opportunity of explaining the changing Greek views on the training of the young. His study vacillates between a summary treatment of Greek culture and ever shifting definitions of "education." We are promised history but we are served everything from archaeology to statistics. The result is bewildering. Throughout the discussions

"education" is allowed to apply to every form of intellectual striving, and history seems to be reduced to the feats of several known heroes. This approach acquaints the reader with many of the interesting educational practices and ideas of Greece but fails utterly to account for their logical character or historical uniqueness. The basis for a judgment on Greek education is never supplied. Mr. Beck's book, in short, although thoroughly documented and informative, is weak structurally. It shows a superficial thematic unity but its disjointedness is felt at every turn of the argument.

The book consists of nine chapters with subheadings and sub subheadings, of critical notes, of an appendix, of two different bibliographies and of a serviceable index. Moreover, it is adorned with twenty-four black and white plates depicting educational scenes from ancient Greece. Its topics fall into three parts. The first, consisting of Chapters II and III, outlines the nature of myth and poetry as the conceptual framework within which archaic Greece pursued its educational ideas. It also attempts to deduce from the preceding nine centuries of intellectual transformations the educational practices of Athens between the sixth and fourth centuries B.C. The second part, comprising Chapters III-VIII sketches in detail the ideas and practices of the "great educators" of the classical period (the Sophists, Socrates, Plato, Xenophon, Isocrates), and closes with a comparison of the outlook of Plato and Isocrates as professional educators. The third and last part, consisting of Chapter IX, pulls together the earlier discussion into a comparative estimate of Greek educational thought. It is concluded there (p. 315) that although "modern educationists" are more sophisticated than their predecessors,

Greek educational thought has still a lot to offer!

The thesis of Chapter I is that epic poetry, both in the oral tradition and in the later written form, was the vehicle of archaic Greek education. Mr. Beck discusses the nature of myth, the character of heroic saga, the epic poetry of pre-Mycenean and post-Mycenean times, and lastly, the role of the poet as a qualified craftsman in training the young through the transmission of the values of the past. Throughout the account there are extensive references to scholars like Jane Harrison, the Frankforts, Webster, Spencer, Rose and others without, however, the benefit of fresh criticism or new ideas. He concludes that early education, interpreted as moral indoctrination, was thought to be best attainable through poetry. It has been established that ancient poetry was concerned with historical events. These events as they were later recorded in the long songs of Homer were recited for popular edification. As their social importance was felt, the preservation of poetry through writing became essential. An élite of scribes established the first "school" for protecting and advancing poetry. The "schools" of poetry were the first places where education (training in a restricted area for a specific goal) was self-consciously pursued. Besides Homer, Hesiod, Mr. Beck believes, was also committed to the educational importance of poetry. There is testimony of that in Hesiod's emphasis on imminent Justice controlling human affairs. And the same is true of the lyric and gnomic poets (Pindar, Simonides, Solon) despite their gradual abandonment of myth. In short, from myth to saga to epic poetry to purgated heroic legends to lyric poetry written for the noble to gnomic appeals for the good life—we are asked to retrace the history of the earliest

ideals and techniques of education. Beck is quite right in relating the growth of poetry to education. But is it also necessary that his readers get entangled in all the details of archaeology, philology, classics, or cryptography? The range of events surveyed within the pages of the first chapter is so vast, the evidence so hazy, our dependence on Homer so extensive, that there could be no discussion of specific topics without a thorough mastery of the entire tradition. Beck tries to avoid this by offering instead the conclusions of specialists as answers to the difficulties he raises, but he only confuses the reader. Proof of this is displayed in his tacked-on conclusions. It is a commonplace that archaic poetry functions educationally, that mythology reflects pre-rational insights, that the criticism of morality displayed in heroic legends marks the dawn of reason. Were these really the developments that Beck had in mind when he set out to explore the meaning and history of archaic education? I don't believe so. It should be said that his evidence shows the very opposite. The archaic world had no teachers, no students, no educational policies and certainly no philosophy of education in any recognizable sense of these words. We could then dispense with the first chapter.

The second chapter is much better conceived and its scope is considerably more modest. It describes the educational policies of archaic and classical Athens in the context of social changes and old traditions. Here references to educational ideas are few and the influence of education is not over-stated. In archaic Greece, Beck reminds us, formal cultural training was offered through private tutors. Only the rich, of course, could afford them. These tutors were entrusted with the education of the young in those things nobility

valued most: a cultivated body and a refined mind. By the time of Pindar (sixth to fifth century B.C.) the picture changed. Solon and Peisistratus made the teaching of letters and writing compulsory, and in response to this the first letter-schools were established. The pupils of these schools came from the ambitious democratic families that were just emerging and their ideals were practical. Nonetheless the old pride in the natural superiority of the noble did not completely vanish. The new classes tried through public education to share in the benefits of cultural excellence, formerly a private reserve of the rich. These ambitions caused social friction. Nature versus nurture was the form of the controversy around which debates on the purpose of education or the importance of inborn talents raged. Formal education during this period consisted, for those who could afford it, of letter teaching by the *grammatistes* (the practical training ideal), of music by the *kitharistes* (the old cultural ideal), and of physical education by the *paidotribes* (the old ideals in a new form). Training was concurrent in these three areas. The method of approach and the redefinition of the old heroic ideals point, as Beck shows, to a gradual institutionalization of education and a social concern for its powers. The curriculum of the *grammatistes* included, besides reading and writing, elementary arithmetic (computational aptitude) and the appreciation of literature. The *kitharistes* taught lyre playing and the composition of lyric verse. The *paidotribes* trained the young to be physically fit and to a lesser extent to become good athletes. Along with elementary education there were much older professional brotherhoods training the young in medicine, law, and the art of teaching. However, since the techniques and goals of such programs

were practical in their orientation—they made no pretence to offer anything but craftsmanship—Beck rightly does not include them in his story of education.

The second chapter clearly establishes the interdependence of social changes and educational institutions, at least in ancient Athens. We note that as social pressures increased toward a more democratic political arrangement educational ideals and practices began to echo the clamor for cultural opportunity. This led to the formation of new and ambitious educational institutions. These educational institutions provided a framework for novel intellectual attitudes. The new attitudes ushered in a more civilized response to political challenges. Beck, by pointing this out, has put to good use a revealing segment of history. We may now understand how an intellectual controversy developed in Athens as regards the goals of education, and why the Sophists, the first avowedly professional teachers, played a key role in it.

In Chapter III Beck offers brief resums of the life and activities of such famous Sophists as Protagoras, Gorgias, Prodicus, and Hippias; and further explains the source of their faith in the possibility of acquiring knowledge. A new dimension in seeking education is suddenly revealed. A radical interpretation of man's longings, in the context of social conventions, disclosed to the Sophists the power of the spoken word and put them well on the way to the glorification of rhetoric and persuasion. Education and the Sophists' instruction became indistinguishable from the power of oratory, and the development of such autonomous disciplines as mathematics, "linguistics," and the psychology of persuasion were openly acknowledged as a great propaedeutic. The chasm between nature and nur-

ture (Physis-Nomos) now seemed bridgeable. Education as a means of assuring mastery over personal and social forces seemed most promising. Learning and teaching, the use of power through personal influence acquired by long association (*synousia*) became the credo of the professional educator of the fifth century. But here Beck fails to show how Plato was frightened by sophistic ideas and why he was prone to exaggerate their adverse implications. Surely it could not have been because of their curricular innovations or their idiosyncratic teaching style or their exaggerated claims regarding political success. It was the paradox of their moral subversiveness *as educators* that really disturbed Plato. Unfortunately this crucial point is not made clear by Beck. He spends so much time informing us of the external trappings of the new professional teacher that he overlooks the indebtedness of the educator to the new social order.

Chapters IV and V nevertheless show that education could not advance beyond the careerism of the Sophists without an understanding of the moral and epistemological issues involved in learning. That is why Socrates is so hard to classify as a teacher. On the one hand he himself insisted that he knew nothing and taught nothing; on the other hand we know that he believed in the value of cross-examination (*aporia*) and demonstrated the role of recollection. Were these mere devices for transmitting learning, for training the young how to acquire knowledge? Beck seems not to worry about such subtleties. He calls Socrates "teacher" and he feels that thereby he has established a historical bridge between the Sophists and Plato. But this only makes Socrates look more a bankrupt Sophist and Plato a perverse social reformer than the great teachers they were. Somehow the

picture is out of focus. This is borne out by the three chapters that follow.

Once Beck reaches fifth century Athens he abandons the project of a comprehensive system of education in favor of individual portraits of great educators. Plato, Xenophon and Isocrates are discussed in detail. With much repetition and lapses into irrelevancy the educational turmoil of classic Athens is starkly reflected in these portraits. Chapter V describes how Plato fitted the educational practices of the city into a philosophically transformed political education. It also shows how Plato, on the basis of his ethical absolutism, developed a program of secondary education which was striking in its emphasis on scientific orientation and its psychological shrewdness. Finally, he describes how and why Plato established the Academy. Beck's remarks on all these topics are correct although there is little else in the line of criticism of educational ideas like "studying," "learning," teaching," "curriculum," the playway method," etc.

The descriptive bias which spoils Beck's account of the Platonic contribution to education also affects his treatment of Xenophon. Chapter VI shows that Xenophon's approach to learning was pragmatic and unimaginative. He was primarily concerned with the practical value of rigorous physical training, with the psychological importance of instructive paradigms of excellence, with the significance of virtue of character achieved through toil (*ponos*). What all these doctrines imply for a comprehensive theory of education are questions never considered by Beck. With Xenophon quickly classified out of the picture, Beck moves to Isocrates' realistic attitudes towards education. In Chapters VII and VIII he selectively outlines the Isocratic ideal of a socially well-adjusted institution of education.

Such an institution, Beck points out, assumed that learning depended on nature (natural talents) and nurture (proper training) and experience (aptitude acquired through constant exercise), and conceived of its role as coordinating these factors in the best possible way. Teaching rhetoric was an ideal means of succeeding in such an undertaking. Whence the cultivation of a refined rhetorical style gradually became the chief objective of the Isocratic school. All these facts are well and good and nice to know. At last we feel that we are once again in touch with the ordinary world. The commonsense attitudes toward life—a desire for personal success and an appreciation of culture through refined sensibility—are restored as educational incentives in the Greek world. But was that something that Plato could accept? It is doubtful. No wonder then that misunderstandings did crop up, as Beck innocently admits, between Isocrates and Plato. (Chapter IX) But now, honestly, what do these misunderstandings imply for the period? What do they foreshadow for later educational experiments or the theory of education? The book closes without an answer. The subject of Greek education proves in the end too subtle to fit into naive history and too rich to be critically contained. Once again the secret of *Paideia*, the miracle of Greece, has eluded us.

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A THEORY OF DATA.

Edited by Clyde H. Coombs.

New York: John Wiley & Sons, 1964.
585 pp. \$14.95.

Coombs suggests that there are three choice junctures in the research process: first, in the original recording of

certain aspects only of a universe of potential observations; second, in the decision as to how to treat the recorded observations as data; and third, in the selection of a model for inference. The principle concern of the book is with the last two stages and with the interactions between these two stages—that is, the emphasis is on “data as analyzed” rather than on “data as obtained.”

Data as analyzed may be placed in one of two distinct sets: either they pertain to a stimulus object, or to the response of the organism. The objective of a theory of data is to represent these stimuli and responses in a space of appropriate dimensionality and metric. To achieve this, it is necessary to utilize the relationships or comparisons among obtained data.

The overall structure of the book is provided by a set of three dichotomies. The first dichotomy hinges on whether the data comparison is between pairs of points or between pairs of distances between points. As an example, a loudness scaling study might be based on the comparative loudness of tones A and B, or on the comparative distances in loudness between A and B and between tones C and D. The second dichotomy hinges on whether the comparisons are homogeneous, involving only stimulus objects, or heterogeneous, involving the relation between stimulus objects and respondents. The tone scaling examples given above are both homogeneous. An example of a heterogeneous interpoint comparison would be whether a person's threshold, T, regarded as a point in the tonal continuum was exceeded by a certain stimulus tone, A. An example of a heterogeneous interdistance comparison would be which of two tones, B or C, was judged farther (in either direction) from a person's preferred or comfortable loudness level, L. The third, and less fundamen-

tal, dichotomy concerns whether the comparison is in terms of great-or-less or of matching between the elements, either points or distances—that is, whether it is an order relation or a proximity relation.

Four major data quadrants are generated by the first two dichotomies, each of them descriptively labeled. Homogeneous interpoint comparisons are referred to as “stimulus comparison data”; homogeneous distance comparisons are labeled “similarities data”; heterogeneous interpoint comparisons are labeled “single stimulus data”; and heterogeneous distance comparisons are labeled “preferential choice data.”

The first section of the book discusses the distinction outlined above, and relates them to data collection methods. Each of the four following sections discusses one of the quadrants, considering relevant scaling techniques for both ordered comparisons and proximity comparisons. Within each section there is a rough gradient from simple inferential systems and weak assumptions of scalability to more complex inferential systems and stronger assumptions. A final section sketches in certain interrelations between the data types, and refers back to earlier formulations of Coombs. Several chapters throughout the book discuss special topics that the author feels are illuminated by this general approach: among these are the imposition, for decision making purposes, of a simple order on data that are inherently partially ordered, and the resolution of disparate preferences for a social utility scheme.

The book may be assessed from several standpoints: first, it is not intended as, and is not well-suited for, use as a general text, even at an advanced level. The exposition of scaling techniques other than those originating with the Michigan group tends to be rather per-

functory, and more accessible accounts of these techniques are generally available elsewhere. Even the presentation of the unfolding procedures and parallelogram analysis which constitute the distinctive contributions of this approach may lose as much as it gains through the attempt to fit them into the quadrant system. That is, while the system may provide perspective on the methods, it also leads to a rather choppy presentation. Nevertheless, the book does communicate what Coombs modestly describes as "an essentially untutored uneasiness" (p. 284) about the strong assumptions entailed in conventional scaling techniques. This would be well worth conveying to students if the frustrations it generates were balanced by the somewhat higher reinforcement rate of a book such as Torgerson's¹ which Coombs considers as a "companion volume."

As a reference work for the research worker in substantive areas, the book may be criticized on several points: first, the new computational procedures that are described are for the most part too unwieldy to be appealing to the investigator who hopes to make sense of a large body of empirical data. Although examples are worked through, they are generally fictitious or restricted in scope and it is not clear how the procedures would be applied to more extensive bodies of data. Surely, some attention has been given to computerizing these techniques and it would seem that suggestions along that line would greatly facilitate the acceptance of the unfolding approach and related procedures. A second criticism may be made of the unsystematic treatment of the problem of determining criteria for the mini-

mum dimensionality necessary to fit a body of data and for the adequacy of the fit. Often these matters appear to be left to the impressionistic judgment of the researcher. This problem is, of course, endemic in all scaling methodologies, but for some of the more familiar procedures one does at least have precedent and convention to build on; for the unfolding technique one is left very much to his own guidelines.

It might be suggested that an answer to the second difficulty lies in a successful treatment of the first. That is, if efficient algorithms are developed to apply the unfolding techniques to complex masses of data, these procedures can then be used to generate sampling distributions for special cases. Such a Monte Carlo process would yield estimates of the stability and uniqueness of obtained solutions when either the data or the sequence of computations was slightly perturbed.

A final difficulty that the substantive investigator may have in using this framework is to find a place for his own data. Although the classificatory distinctions seem cogent for many forms of questionnaire and verbal judgments, it is not clear that they are helpful in sorting out, or suggesting a model for general non-verbal behavior. However, this is not a matter for critical judgment *ex cathedra*. A framework as comprehensive as this requires living with over a long period of time, and may only become fully useful with continued use.

As a progress report on the efforts and accomplishments of Coombs and his associates at Michigan, the book commands respect. The methodological problems that have been tackled are extremely difficult ones, and the approach described here has entailed a minimum of compromise and has been marked by considerable ingenuity.

¹ Torgerson, W. S. *Theory and Methods of Scaling*. New York: John Wiley & Sons, 1958.

Commendably, both the successful efforts and false or abortive starts are described. This book will have served a valuable purpose if, in spite of its rather forbidding form, it succeeds in stimulating new methodological attacks on some of the unsolved problems, and also more inviting presentations of the successful techniques.

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COMPLEX HUMAN BEHAVIOR:
A SYSTEMATIC EXTENSION OF
LEARNING PRINCIPLES.

Arthur W. Staats and
Carolyn K. Staats.
New York: Holt, Rinehart and
Winston, 1963, xiii, 546 pp. \$7.50

This book is an exercise in the behavioristic description and explanation of human behavior. In its first three chapters the authors describe the basic principles to be followed in their exercise. In the eight following chapters various kinds of human behavior and concepts of human behavior are interpreted in terms of these principles. Since the nature of the book is such, its evaluation must be based on two criteria: (1) How clearly do the authors describe the basic principles? (2) How accurately do they follow these principles in their interpretative exercise?

The authors' assumption regarding human behavior is that it is learned and it is learned according to the principles of either respondent (classical) conditioning where, stated simply, one stimulus is substituted for another in eliciting a response, or operant (instrumental) conditioning where the frequency of the emission of a response depends on the nature of reinforcement which follows it. In describing these

principles the authors draw heavily on B. F. Skinner. As a matter of fact, Skinner's *Science and Human Behavior* and *Verbal Behavior* provide the basic framework, directions, topics, and sample interpretative exercises for the present book. However, unlike Skinner, Staats and Staats do not regard these principles as the only learning principles. Instead of describing them in detail, they add several other "principles" adopted from such theorists as C. L. Hull and O. H. Mowrer. These "principles" are: sequences of responses, self-reinforced behavior, mediated generalization, and response hierarchies. This is done under the rubric of integration of principles, as if the added "principles" were on a par with the other principles.

The result of such an integration is not an improvement over the approach taken by Skinner, Hull, or Mowrer, but a loss of consistency in the principles as a whole. A careful examination of these "principles" added to those of respondent and operant conditioning indicates that they are no more than *inferential descriptions* of certain behaviors, such as walking, thinking, and anxiety, which the authors do not or can not explain quite successfully in terms of either respondent or operant conditioning. In other words, portions of the basic principles to be used in the authors' interpretative exercise are not really principles, but, already, interpretations.

Thus, on the one hand the authors imply that every response is either a respondent or an operant, but on the other hand they make no clear distinction between the two types of response "in the interest of simplicity and because in general the same principles hold for both respondent and operant conditioning." (p. 56) On the one hand they emphasize an empirical relationship between a set of observable stim-

ulus conditions and a set of observable response conditions, but on the other hand they tell the reader that "even casual consideration seems to indicate that some of our most important responses are not directly observable." (p. 93) On the one hand they warn the reader against the use of behavioral concepts which can not be operationally defined, but on the other hand they recognize certain implicit stimuli and responses and treat them as intervening variables having explanatory values. On the one hand they say that a drive is not a stimulus because Skinner says so, but on the other hand they say it is a stimulus because Hull says so. On the one hand they clearly state that without reinforcement a response will be extinguished, but on the other hand they casually mention that simple stimulus-response contiguity without reinforcement may be sufficient to maintain the strength of a response.

Through this sort of set of "principles," the authors seem to be saying, in effect but never explicitly or systematically, that there are more types of response than just two, a respondent response and an operant response. These seem to be: a sequenced or chained response such as walking and driving; an implicit response like thinking and meaning; a self-reinforcing response like enjoying working; etc. The problem is that the authors attempt to describe these responses in terms of respondent or operant conditioning, but the descriptions are inferential, as mentioned above, and these inferential descriptions are presented as part of the basic principles. Even in the section where the basic principles are supposed to be described, the reader very frequently encounters such conjectural expressions as *it can be thought to have, this would be considered to have, it appears, it seems, this may be, and it would seem.*

In the same section, he reads a statement:

The explanation of how chains of responses are strengthened becomes quite complicated. In some cases, it would seem that simple contiguity of the S-R components, as occurs in classical conditioning, is sufficient. In other cases, reinforcement, as it occurs in operant conditioning, is obviously involved. (p. 91)

Incidentally, this is all that is said under the topic of "the principles involved in strengthening response chains." In the interest of "simplicity," much clarity is lost in the authors' integrated principles of behavior.

Speech is the first behavior that is interpreted in the exercise section. The authors state that it is learned through operant conditioning. Accordingly, they describe the process of shaping, source of reinforcement, and process of stimulus discrimination involved in the learning of speech, following more or less the paradigms used by Skinner in his *Verbal Behavior*. One deviation from Skinner is that, whereas in the Skinnerian paradigms practically all verbal behavior is controlled by an audience as a discriminative stimulus, the present authors think that many verbal responses are controlled by a great many internal stimuli produced by deprivations of various sorts. These implicit stimuli are given explanatory values, but other than hunger and thirst drives there is no mention of what these stimuli are.

Another significant deviation is that, whereas Skinner treated verbal behavior as one operant behavior, in the present book it is divided into observable speech responses and implicit "meaning responses." The reader is told that "the principles involved in the learning of word meaning appear primarily to

be those of classical conditioning," (p. 141) and that a meaning response is a type of intervening variable. When a verbal stimulus, visual or auditory, is presented frequently with the same object stimulus, it begins to elicit whatever responses the object elicits from the learner. These elicited implicit responses are said to be the meaning of the verbal stimulus. In other words, according to the authors, words are conditioned stimuli that "stand for unconditioned stimuli."

This definition of meaning, which is not original, has faced several often-repeated questions. If words are conditioned stimuli, what are the unconditioned stimuli for the so-called function words? In answering this question, the authors resort to the common explanation that those words without object referents, i.e., assigns, acquire meanings through being paired with words having referents, i.e., signs. But, few can be convinced that children are taught the meanings of such words as *and*, *for*, and *is* through the use of other words. If the meaning of a word is a response learned through classical conditioning, in a real life situation, is a word, as a conditioned stimulus, presented always before an unconditioned stimulus? For example, in teaching the meaning of the word *ball* to a child, does a mother say the word before she presents the ball or after? In the example given in this book, the word is said to a child when he is playing with it. This question of temporal relationship is important, because it is a fact that backward conditioning rarely works in classical conditioning. There is another question. When the sound of a bell elicits a salivary response in a dog in classical conditioning, does the bell sound "stand for" or "mean" food to the dog? Does any meaning response act as an intervening variable between the bell sound

and the salivation and between every conditioned stimulus and the observable response it elicits?

With regard to the relationship between speech and meaning, the authors explain that speech, which is interpreted as an operant, is conditioned to meaning through classical conditioning and elicited by meaning and vice versa. This explanation raises an interesting theoretical question. Do operants become respondents? If so, do discriminative stimuli become conditioned stimuli and elicit former operants as respondents? The authors use the terms *elicit* and *emit* indiscriminatively, because their discriminative usage is "cumbersome" (p. 77) and because the difference between the two types of response is not significant. However, the authors never mention whether or not, and when and under what conditions, if ever, an operant becomes a respondent.

There is also a question on the matter of reinforcement. If signs are the unconditioned stimuli for assigns, then they must act as reinforcing agents to maintain the strength of the meaning responses of assigns. It is easy to assume that in a real life situation the meaning responses of signs are constantly reinforced by their referents, but it is difficult to assume that assigns are similarly reinforced by signs. And, yet, signs seem to be extinguished or forgotten more easily than assigns in everyday life. In the authors' interpretation of verbal behavior, no satisfactory account of the source of reinforcement and the nature of controlling stimuli is given. Incidentally, the authors warn the reader that extinction is different from forgetting and they explain extinction in terms of withdrawal of reinforcement, but leave the term forgetting in quotation marks unexplained.

After verbal behavior, an analysis is

made of other behaviors such as mathematical behavior, scientific behavior, reasoning behavior, personality traits, social interaction, baby feeding, toilet training, and crying behavior. Since no definition is given regarding what constitutes *complex* human behavior, which is the title of this book, there is no way of knowing how these behaviors were selected.

In interpreting these behaviors, the authors classify them roughly into three categories. To the first category belong scientific behavior, mathematical behavior, problem solving behavior, and other similar behaviors which are explained in terms of verbal behavior. Knowledge is verbal behavior, according to the authors, and reasoning, thinking, and other complex behaviors are sequences of language responses. Thus, the solution of a problem, for instance, is said to depend on the "elicitation" of the right sequence of language responses by an environmental stimulus. A sequence begins when a stimulus elicits a language response. This first response produces an implicit stimulus which elicits a second response which produces a second implicit stimulus which elicits a third response and so on. Most of the authors' interpretations of complex behaviors consist of elaborate illustrations of what such language sequences may be in actuality. However, these suffer from the same ambiguities that are found in the interpretation of verbal behavior.

The second category includes such concepts as personality and traits, which are interpreted as behaviors learned through operant conditioning. The reader is advised not to think of them as internal processes and entities. In the third category several behaviors of children are discussed as operants. The authors' point is that crying behavior, eating behavior, dependent behavior,

sex behavior, and others may be controlled in terms of the frequency and magnitude of their occurrence, and placed under the control of proper stimuli through the manipulation of reinforcement. When behaviors are dealt with as complete operants, the authors' interpretations are very much convincing.

Although the authors suggest that this book be used as a text in various psychology courses, the chief value of the book is in its rich illustrations of how language *may be* functioning in human behavior. The words *may be* are italicized because the interpretation of verbal behavior itself is not yet satisfactory. In the preface the authors state that, for the sake of practicality and simplicity for the student reader, this book avoids discussing other psychological approaches to explain human behavior. This would be acceptable, if the book were presenting an original theory of behavior. Otherwise, simplicity may be considered a euphemism for expediency. The reviewer feels that in the college curriculum realistic complexity has a more respectable place than unrealistic simplicity.

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MEANING AND TRUTH IN THE ARTS.

John Hospers.

Hamden, Conn.: Archon Books, 1964,
252 pp. + viii. \$7.00.

Professor Hospers has contributed much to clarity and good sense in aesthetics in the many articles he has published over the years. The republication of his early work, *Meaning and Truth in the Arts*, after almost twenty years, makes available once more an excellent single-volume introduction to issues in contemporary aesthetics. The work di-

vides into two parts. The first, on Meaning in the Arts, deals with representation, expression and meaning in music, painting and literature. The second, on Truth in the Arts, contrasts propositional truth ("truth-about") with artistic truth ("truth-to"), and considers their relevance to critical appreciation and to the question of art as cognitive. Although the question of form is dealt with explicitly in only the merest sketch (p. 10), the critical question of the relation of form to meaning (in various aspects, as in the relation of form to subject matter, to representation, to expressive content) underlies the whole analysis.

Hospers begins with the assertion: "the starting point of all philosophy of art is the fact of esthetic experience." (p. 3) What makes experience esthetic is "one kind of attitude . . . without which the use of the term 'esthetic' to apply to anything distinctive must quite disappear." (p. 4) Whereas our ordinary perception is in terms of practical responses to an environment—"chairs are to sit on," "murky skies portend rain," etc.)—this extraordinary esthetic perception requires that our ordinary perception be held in suspense. This esthetic attitude is, moreover, undefinable in words, in the same sense that the taste of a persimmon is verbally undefinable. All one can do, according to Hospers, is call attention to certain experiences, and ask someone to remember his attitude on such occasions, contrasting it with that on other occasions. I must admit that all talk about esthetic attitude—such a large part of esthetics—strikes me as strained and artificial; it functions rather like the "state of nature" in social theory: a convenient philosophical fiction brought in for the sake of making a distinction, but hardly to be taken literally. I *know* for example what it

means to pay attention to certain things, and not to others, but this is hardly an undefinable attitude.

In any case, the subjectivist emphasis of Hospers' analysis is clear from the outset: the content of esthetics depends in the first place on an attitude in the observer or appreciator (or "in his experience") which in effect constitutes the esthetic field. What this attitude selects out, so to speak, is first the "primary material" of art, or what Hospers calls "the first level or dimension of esthetic experience:" the "feel" of the sensuous presentation, sheer sounds, sheens, textures, tastes—akin to what Prall called "esthetic surface." The second dimension of this (still) "primary material" is *form*. Surface and form—Prall's sensuous elements and their orders—constitute what Hospers calls the "thin" sense of esthetic experience. The "thick" sense includes, in addition, the life-experiences or life-values, the "taking-up-into-art of material from life which makes art more than esthetic surface and esthetic form." (p. 12) This third dimension is the one which a formalist esthetics would exclude. ("To appreciate a work of art we need bring with us nothing from life, no knowledge of its ideas or affairs, no familiarity with its emotions," wrote Clive Bell.)¹ In contrast to the primary material, which is "mediumistic," Hospers calls this element of life-values or life-experiences in the compound of art the "secondary material." It is the tension between concepts of art as surface *cum* form, and as *more* than this—as expressive, representative, true-about, revelatory of essences in common experiences—that lends an almost dramatic interest to Hospers' analysis.

Hospers introduces his discussion of

¹ in *Art*, London, Chatto and Windus, 1914, p. 25. Cited by Hospers, p. 98.

meaning in the arts by stages: he starts with meaning in its purely referential sense, proceeds to the notion of *expression*, and thence to a definition of distinctively artistic meaning, in terms of *evocation*. The sequence moves from what is an objective, and essentially public sense of meaning, to a sense of meaning which is radically subjective, personal, indeed, autobiographical. Meaning as reference requires the use of symbols which represent, or stand for something by virtue of either an assignment of meaning by convention, or by a natural relation between symbol and referent. Hospers' discussion of "semi-conventional symbols" (e.g., musical allegory in Baroque music, iconographic representation) is most interesting. But the heart of the chapter on representation is the question of what a work of art can be said to represent, and how this representation takes place. Hospers introduces an unfortunately uncritical and common sense notion of "literal imitation" or "photographic representation," as the limit of representationalism in art, and this sometimes compromises an otherwise careful discussion. (He modifies some of the *simpliciter* character of his discussion later, in chapter 4, where he discusses realism and naturalism in literature.) The problematic case of representation in the arts is not especially that of painting, or literature, but music; except in the incidental cases in which music "imitates" natural sounds, or in which extra-musical conventions are used to assign meanings, music is seen to be essentially non-referential, but *not* therefore without meaning. It is the deeply problematic question of musical meaning, which has exercised so many estheticians, that leads Hospers to a consideration of *expression*. Expression hasn't the constraints which representation by conventional or natural symbols has (in

that stronger sense which Hospers wants to reserve for the term "representation," i.e. "independent of subjective fancy, either through a recognized convention or through some natural relation.") (p. 49)

Thus, a musical work may not *represent* grief or joy, in any referential or imitative sense, but may be said to *express* it. Hospers, after eschewing discussion of expression in the sense of the *act* of expression (*à la* Dewey, Croce, Collingwood), distinguishes two senses of expression "as something characterizing an experience which we derive from art or nature as observers:" (p. 63) (1) When I infer, from someone's expression, that he is happy, it is a question of objective fact whether he is happy or not, and my inference may be correct or mistaken. (2) If, instead, "expression" is taken in the sense of evoking a certain impression or feeling or image or idea *in me*, then this "expression-to-me" and "seeming to express" (in the sense of what I infer) collapse into each other. Hospers points out that not all *evocations* are *expressions-to-me*, for as with representation, he wants to reserve a stronger, or at least more specific sense for "expression"—one which involves the fused association of object and impression, in which the expressive object and its expression-to-me "lie together in the mind," in Santayana's phrase. Evocations, on the other hand, require no association with, or attribution of corresponding qualities to objects. Evocation-meanings, then, have no rule, no convention of association, no common sense or natural relation to whatever it is that evokes them: they are just what they are, and *stand for* nothing, nor do they in most cases *express* anything, on Hospers' account. They are uniquely personal, autobiographical in their "thick" context, and rule-free. And it is to these that Hospers turns for his

definition of the meaning of a work of art. "*A work of art means to us whatever effects (not necessarily emotions) it evokes in us; a work which has no effects on us means nothing to us, and whatever effects it does evoke constitute its meaning for us.*" (p. 75)

This is nothing so definite even as stimulus-meaning,² for *evocata* have no establishable relation to the work of art except that it evokes them, and that its meaning as a work of art is constituted by them, exhaustively. Hospers says his definition is "arbitrary," but he thinks it is justified. He considers it an elementary semantic principle that in meaning as reference, no word (or symbol) has meaning outside of that conferred on it, in a standard way, by convention, or by assignment of meanings in given contexts. Now such a "sufficient modicum of standard reference, even when applied to esthetics" is available in the concepts of representation and expression, despite ambiguities. But, says Hospers, the concept of meaning in the arts has "no conventional meaning (reference) in locutions such as 'what is the meaning of this piece of music?'" (p. 77) In such a case Hospers suggests we stipulate a useful meaning, such as that provided by his definition. "What does the work of art mean?" is therefore a "pseudo-question," to be replaced by the question "what is the relation of the formal content in a work of art to the expressive content, or life-values it evokes in our impression of it?" The formalist problem of meaning vanishes then (or is absorbed), since even so-called "pure form" has meaning if it evokes effects in us. But then too, if one takes Hospers seriously here, all criterial judgment as to whether some-

thing is a work of art, or whether the *evocata* are esthetic or not vanishes as well. All one can rely on presumably is some assurance that he is in an "esthetic attitude," and this one has just to know, somehow, since it can't be defined for him. Thus, the evocation by *this* formal content of *that* set of responses in the observer's experience constitutes the work of art's meaning, and *chacun à ses évocations*. Meanings change as shiftily as evocations do, and by definition there are no standard or normal evocations, if evocation-meaning is fixed neither by convention nor natural relation. This is pretty slippery stuff. Meaning in art, as Hospers carefully establishes, is not unrelated to representation and expression (though these by themselves fall esthetically short). So it is hard to see why, if these latter have even a "modicum of standard reference," the meaning of a work of art should stand as nakedly personal as Hospers makes out.

The discussion of painting, music and literature in the chapter on Meaning is extensive and enlightened, and serves to temper the radical subjectivism of the bare definition. But where the definition is used, it leads to difficulties. For example, Hospers' discussion of the meaning of poetry becomes problematic, if not inconsistent with what has gone before, if one takes the definition seriously. Hospers points out that in poetry, the referential use of language is a *prerequisite*, but no more than that, since conventional meanings are *transparent*, having no aesthetic value in themselves. Thus poetry, though it uses words (*and* their meanings), is not limited to this referential function, but can give, in Prall's phrase, "a precise specification of the emotions" by *evoking* rather than *describing*; and this, ostensibly by means which go beyond referential use. This evocation then is the specific character of poetic language.

² Cf. W. V. Quine, *Word and Object*, Cambridge, Mass., Technology Press, 1960, pp. 32-35.

So far so good. But Hospers proposes, by way of example, that the inability of immigrants to grasp "the spirit of American poetry" is due to the fact that "*they don't know the idiom*, the finer shades of meaning elude them," and they are not aware of the "cluster of affective associations which gather around every word." (p. 125) But if, as Hospers says, "a poem, like any work of art, 'means' to us simply what is evoked in us," (p. 123) then by what criterion *does* one establish what the "spirit of American poetry," or its meaning, is, *apart from* such evocations? Is there some criterion for better or worse evocations, or any ground for the comparison of evocations, such that one could then assert that x "knew the idiom" (i.e. "got the 'right' evocations") whereas y didn't? If the appeal is to the primary material of poetry as "*words and their meanings*," (p. 127) this is circular, since "meanings" here are "evoked impressions" *beyond* referential use, if the poem is to be understood as a work of art, as more than a scientific report of information. Hospers makes the condition that "one must be acquainted with the cluster of affective associations which gather around every word—the emotions they normally evoke, the images to which they give rise." (p. 125) But what is "normal evocation?" What most people get? A statistical report? Once *normality* is introduced, once the *idiom* is admitted to be crucial to *poetic meaning*, then the uniqueness, or the "to-me-ness" of artistic meaning, as distinct from representation and the expression of identifiable emotions, seems to be lost. And it was this, after all, that the definition was introduced to uphold. It strikes me that the difficulties here are curiously analogous to those of emotive theory in ethics.

In part II, on Truth in the Arts, Hos-

pers proposes to examine "whether or not, in some not too unconventional sense, art 'is true,' 'gives us insight into reality'." (p. 145) After eliminating from his purview a number of uses of "true"—(talk of "truth in art" as *sincerity*, *acceptability*, *value for mankind*, *coherence of parts*, as against, e.g. a "false character" or a "false note," *consistency*, *greatness* or *profundity*, e.g. "How true," or in some general and vague honorific use)—Hospers concerns himself with that sense of 'true' which is invoked in notions of *verisimilitude*, the ideal of realist and naturalist art. As against Zola's dictum that "the novelist is but a recorder. . . . The naturalistic novel never interferes,"³ Hospers points out (in rather standard fashion) the absurdity and impossibility of the "ideal of pure realism." He takes the view that only propositions are true or false, and only sentences express propositions. In this sense of truth (which he calls "truth-about") the only truths in art can be those in literature (which uses sentences), and such *propositional* truths are esthetically incidental to literature, since "the function of literature is not to state facts." (p. 157) T. M. Greene suggests, in this context, that propositions can be expressed in an indefinite number of media—not in sentences alone—and can therefore be true or false in all these media.⁴ But Hospers insists that without a rule or convention, it can't be said that sounds, colors, gestures in the arts *assert* anything. ("If musical notes express propositions, *what* propositions do they express?") (p. 160)

Yet, Hospers sees another sort of

³ Emile Zola, *The Experimental Novel*, New York, The Cassell Publishing Co., 1894, pp. 123-4, cited by Hospers, p. 146.

⁴ T. M. Greene, *The Arts and the Art of Criticism*, Princeton, Princeton University Press, 1940, p. 425. Cited by Hospers, p. 159.

truth relevant to the arts: not verisimilitude, or "truth-about," but "truth-to," as when one says a portrayal is "true to human nature," or "true to the experienced qualities of things," and is so, Hospers adds, in a *verifiable* way. He talks about this as a "disclosure of an essence that is discoverable in experience and true-to that experience." (p. 192) The "essence" here is some universal trait in human experience—either in human character, or in situations, sequences of events, objects in the world, and even such "all-pervading phenomena like light and massiveness." (p. 192) What we have here is, in effect, a version of Aristotelian "ideal-imitation" or *mimesis*, in which there is not merely imitation but creative intuition, not mere copying of forms, but discovery and revelation of some abiding character of things by the artist. Such a disclosure can be verified as "true-to," "by our being conditioned by it in our subsequent perceptions; and it is verified in experience: we need not hypostatize it to lend it dignity and importance." (p. 194) For example, "What Cézanne saw, we too can see," and in this sense Hospers says we "verify" Cézanne's special vision as "true-to-life."

Hospers raises an all-important question here as to how art may be said to be cognitive. But when all is said and done, it is hard to see what sharp distinction there is between "truth-about" and "truth-to." That the latter re-educates our perceptions so that we *see* this essence (metaphorically of course) means to me no more than that we have stated (formed?) a proposition whose reference is this essence, and that we are made aware of the correspondence between the artistic expression (sentence?) and the essence to the extent that we can "verify it in our experience." I don't know what one can verify that is not a proposition, and so I would be

happier to extend the notion of *proposition* (or give it back its sense of *propositiveness*), and to consider including Greene's nonsentential expressions, rather than to accept a queasily systematic distinction between "truth-to" and "truth-about." However queasy, Hospers does use the distinction to advantage for analytic purposes, in the final discussions on the artistic relevance of truth, and the notions of "reality" and "knowledge" in the arts.

There are minor typographical errors on pages 152 and 237 and a wealth of quotations of materials relevant to Hospers's discussion.

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REFERENCE GROUPS: EXPLORATION
INTO CONFORMITY AND DEVIATION
OF ADOLESCENTS.

Muzafer Sherif and
Carolyn W. Sherif.
New York: Harper & Row, 1964,
320 pp + xiv. \$6.00.

This book is concerned with the "behavior of adolescent boys in groups with which they associate by their own choice, whose activities [are] not directly initiated or programmed by adults, and which [function] in large cities in neighborhoods characterized as "high," "middle," or "low" in rank through the use of sociocultural indexes." It is a "must" for all serious students of adolescent psychology, and particularly for those persons interested in the social psychology of adolescence. The importance of the book inheres less in its findings, which were foreshadowed or established in previous studies by the authors and other investigators, than in its outstanding methodological innovations. The latter, in essence, consists of the application to spontaneously formed adolescent

groups of the authors' well-known methods of studying intra- and inter-group relations.

The methodological contributions of this work may be briefly summarized as follows. First, the authors studied the behavior of the adolescent "as a function of membership in a group of his *own* choosing and of the sociocultural setting in which his group operates." Second, the contaminating influence of the "investigator-subject" relationship was reduced by using observers who "fitted" naturally into the groups under investigation, and by insuring that the individuals did not know they were being studied. A credible pretext was always established for the presence of the observer, and his role in interacting with group members invariably conformed to this pretext. Third, "investigator bias" was minimized by employing a "combination of methods to obtain data" ("including observation, informal sociometric choices, ratings by regular and other observers, 'situational tests,' and judgmental indexes adapted from the psychological laboratory"), and by using "independent observers who were not informed about the problem or the nature of the group under study." Fourth, by studying groups of low, middle, and high socio-economic status, it was possible both to test the generality of the findings and to ascertain important interactions between intra-group influences, on the one hand, and influences emanating from the neighborhood and wider culture, on the other. Finally, methods of study and observation were developed which did not "clutter or interrupt the flow of interaction among group members." As the authors observe, students of small-group behavior seem to forget all too frequently that "in the interactions there are content and episodes which the members feel should remain within

the domain of their intimacy and which are not enacted for the convenience of an investigator with a recorder at scheduled times." The conclusion seems warranted that the use of these methods made it "possible to observe [groups] with the consent and cooperation of authorities in the area and without group members becoming aware that their actions are of research interest."

In harmony with the findings of previous studies, the Sherifs show that interpersonal relations within informal, spontaneously formed adolescent groups are highly patterned with respect to the roles, statuses, and reciprocal expectancies of their members. Leadership defined in terms of "effective initiative" is correlated with but clearly differentiable from popularity. Top and bottom positions in the group emerge earlier than intermediate ranks and can also be reliably observed sooner. Observers' ratings not only agree with each other but also with the members' own appraisals of status. Leadership changes hands as the focus of activity within the group shifts, and is much more a function of the leader's commitment to group goals and of his ability to facilitate and coordinate group activities than of such characteristics as physical prowess or temperamental dominance.

In all of the groups studied, boys wanted to "do things *on their own*, without programming or intervention by the older generation." In addition, youth of all socio-economic ranks appeared to have assimilated the aspirations indicative of material affluence in American society; but in low rank neighborhoods the boys did not internalize to the same degree as in high rank neighborhoods the goals and character traits necessary for the implementation of these aspirations. This finding is evidently typical

of adolescents in minority ethnic groups undergoing rapid acculturation* as well as of underprivileged youth in urban slums. What is lacking in these latter instances is the presence of suitable pressures and expectations from peers and parents. Nevertheless, there is not "among any large segment of youth a total devaluation of education." Although they lack clarity about vocational aspirations, adolescents in low rank areas

set their goals at high levels. With reference to the achievements of their parents, with reference to opportunities clearly available in their settings, and with reference to their own conception of success . . . youth in low rank areas are, on the whole, more ambitious, more 'achievement oriented' than those in high rank areas.

Thus, the outlook for developing character traits consistent with high achievement motivation (e.g., willingness to undergo prolonged educational and vocational training) is apparently much less bleak than we have been led to believe.

The authors rightly deplore the current tendency to decry conformity as an unqualified evil in and of itself rather than to examine "*what* is conformed to and *why* individuals conform to certain values" instead of others. They point out that a certain desirable degree of conformity is necessary both for the viability of small groups and for the development and perpetuation of culture. Their findings indicate that conformity to group standards depends, for the most part, on "the internalization of shared expectations" and of a set of norms which the group members

themselves help to formulate; overt pressures and sheer physical force are relatively minor factors.

The group norms that are most binding and most consequential in the members' scheme of concerns are the ones that regulate matters of solidarity among members and that set standards of conduct in the very spheres of motivational promptings that [bring] them together. The most tightly knit groups observed were those whose members had fewest stable ties with other groups and institutions, hence whose belonging was highly important to them.

Group solidarity was, therefore, highest in low rank neighborhoods. In all groups, however, the range of acceptable behavior exhibited least latitude for the leader and high status members. "In matters related to the maintenance of group activities and of loyalty, the leader is expected to be the exemplar."

The authors' treatment of conscience and guilt is somewhat oversimplified and, in this reviewer's opinion, unnecessarily overextends the otherwise useful concept of reference groups. In accounting for the fact that some adolescents can commit actions at variance with the standards of their parents and of the wider culture without *apparently* feeling guilty, Sherif and Sherif explain that conscience involves a set of prescriptions, loyalties, obligations, and approvals that change with continuing development. They assert further that during adolescence it is primarily the prescriptions and approval of their fellows that *really count* for such individuals and determine whether or not they experience guilt feelings. But this is hardly an all-or-none matter. The emergence of new reference groups and the internalization of new norms do not imply *complete* repudiation of pre-

* See, for example, D. P. Ausubel, *Maori Youth* (Wellington, New Zealand: Price, Milburn, 1961).

viously internalized obligations. Conscience is more than a simple reflection of the standards and loyalties that happen to be most salient at a given stage of development. *Residual* obligations internalized from previous interactions with significant persons and institutions still continue to exercise an important regulatory influence on behavior. Thus it is simply not true that most deviant adolescents do not experience any guilt feelings whatsoever when violating the norms of parents and of the wider culture. It would be more accurate to say that peer approval does *not* abolish guilt feelings for delinquent acts committed during adolescence but merely attenuates these feelings as well as makes such acts possible in the first place. Nevertheless, the authors completely disavow the moral relativism and non-judgmentalism that are currently so fashionable in clinical circles. They deny that plausible psychological *explanation* of misbehavior exempts such misbehavior from ethical evaluation or those who commit it from moral accountability.

Sherif and Sherif continually reaffirm the importance of acknowledging the significant role of informal groups in shaping individual behavior during adolescence, and berate the folly of "viewing adolescent groups that engage in socially objectionable activities as the doings of a small number of psychopathic individuals." In common with other researchers they emphasize the group-related character of most delinquency and point out that members of delinquent groups tend to be sociable, loyal, and altruistic rather than antisocial or emotionally disturbed. They also insist that all adolescent groups, regardless of whether they are termed "gangs," "cliques," "clubs," or "sets," share the same "essential properties of group formations in varying de-

gree." Neither delinquent behavior nor groups of high solidarity are restricted to low rank areas. In any case illegal activities constituted only a small fraction of the total behavior of any of the groups studied by the authors.

In considering the implications of their findings for the prevention of delinquency the authors place particular stress on inter-disciplinary research and on recognizing the contribution of dominant values in the wider culture to the causation of antisocial behavior. "The crux of the matter for effective policy and action," they state, "is not the busy-work *as such*, not the programmed activities *as such*, or even the end products of training to exhibit for public display. The cardinal point is to insure throughout (whatever the activities) the youth's feeling of having a *function* in their initiation, development, and execution."

The principal defect of this book is that it is not always completely clear whether the findings and conclusions are based upon actual evidence obtained in this *particular* study or whether they pertain to previous studies by the authors or to the literature in general. The presentation of the material also suffers from excessive redundancy. These minor deficiencies, however, do not detract from the fact that by any standard this is the most significant work on adolescence that has appeared in the past decade.

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COMPARATIVE METHOD IN EDUCATION.
G. Z. F. Bereday.
New York: Holt, Rinehart & Winston, Inc., 1964, 302 pp. \$5.25.

Dr. Bereday's work at Teachers College Columbia University, where he suc-

ceeded Dr. Robert King Hall and Dr. George Counts, his editorial work on the *Year Book of Education* and the *Comparative Education Review* and his many articles and books, have given him a worldwide reputation as a comparative educationist. Until *Comparative Method in Education* appeared there was no single source to which students and scholars could turn in order to understand his methodological position. This book obviously reflects the evolution of his thinking and indeed bibliographical notes make clear that many chapters are based upon previously published articles. It is useful to have them brought together to make a coherent whole. Assessment of the volume is almost bound to be made on the basis of two somewhat different criteria—the author's intentions, and the extent to which it makes a significant contribution to the development of comparative education as a well-grounded academic study.

This book is intended as "an introduction to a systematic study of comparative education. . ." (page ix) and was written for "the layman and the beginning student of the field" (page ix). In fact it should appeal most to the latter. The reasons are fairly obvious. The style of writing is a forcible reminder of Professor Bereday as a lecturer who can captivate and inform an audience by providing for it a mixture of general principles, illuminating details and apposite anecdotes. Students are told systematically how they should prepare themselves to become comparative educationists. They should have a "knowledge of the language of the area under study," have lived abroad and, as observers, striven ceaselessly to control their "own cultural and personal biases." (p. 10) Thus equipped the student of comparative education "must begin by acquiring a thorough familiar-

ity with the educational system of one cultural area." (p. 10) One aspect of this task would involve participation in a school survey executed by a team of scholars which would include "administrators, philosophers of education, psychologists, sociologists and statisticians." (p. 14) Then students are ready to interpret data drawn from two or more countries, juxtapose them and move on to comparisons with a theme in mind. A more advanced, but still only partial, type of study follows in which the student tackles limited problems and gives to them a comparative perspective. In area studies and the problem approach four aspects—description, interpretation, juxtaposition and comparison—are involved and follow in the order given. A final stage, total analysis, is apparently beyond the reach of most students. It is for a few distinguished scholars and would be concerned with the overall "impact of education upon society in world perspective." (p. 25) The outcome would represent "a *magnum opus* of a researcher's career." (p. 26) Only a few well-known pioneers like Kandel, Schneider, Ulich, Rosselló and Lauwerys have attempted it thus far.

In Part IV, *Resources*, a useful survey is presented of the position of comparative education in the world including descriptions of teaching and research centres in the USA and elsewhere. The comprehensive outline of printed sources now available to students at various levels of preparation is particularly valuable.

Dr. Bereday's case studies follow his proposals very closely. He shows how description, interpretation, juxtaposition, and comparison flow one into the other. In Chapter II he illustrates these procedures by reference to reforms in Turkey and France. Part II consists of sample problems used as bases for

comparative analysis. One country, Poland, illustrates the problems of indoctrination through education. A two country comparison deals with the scientific potentials of the USA and USSR. Teacher performance in England, France, and Germany are next compared, and finally, the control of curricula in four countries—USA, USSR, France, and England. In Part III Dr. Bereday returns to his prerequisites—language, travel and understanding—and illustrates students' need for them by reference to his own experiences in USSR (language), Colombia (travel), and England (intellectual objectivity).

The coherence and orderly arrangement of the volume must be admired. It should give students an added sense of security to know how to put down data, draw conclusions from travel observations, and make use of printed sources. Few comparative educationists would quibble about the ingredients of Dr. Bereday's prescription and students who accept it should benefit. But should he be quite so positive about his priorities and sequence of studies? Some students without his flair for languages may justifiably feel that the scope of their work will be restricted. Others, particularly if they have special qualifications in the social or natural sciences, may wonder why he regards the problem approach as merely an apprenticeship for a total analysis. (p. 23) Again, are observations, based on travel, necessarily more important *ab initio* to a comparative educationist than a well formulated conceptual framework? In fact there appears room in comparative education for persons whose special qualifications lie in their knowledge of a particular country and its language, for those trained in one of the social or physical sciences, and for philosophers. Many points of departure are possible provided that a modest command of the

other prerequisites is consciously acquired. The interdisciplinary feature of modern comparative studies would seem to demand this degree of permissiveness.

This book is obviously not intended as a *magnum opus* of the author's career, but on the basis of his own modest criteria *Comparative Method in Education* succeeds. Yet at another level one feels bound to ask what contribution it makes to present-day discussions about method in comparative education. Does not Dr. Bereday make rather too much of the evident value of knowing a language, without really getting down to the task of classifying sources of data on the basis of their reliability? Is there not room for more discussion on the possibilities of building up glossaries which would help to make educational terms meaningful across linguistic and ideological boundaries? Is it not also necessary to evolve an international language of discussion in comparative education? These points are touched on without being rigorously pursued. Again, should not more have been said about some of the questions which have perplexed comparative educationists for many years? Is a science of education possible? What constitutes knowledge? What are the dangers of attempting to quantify comparative data? What role in the acquisition of knowledge do observations play?

In short is it enough to say what ought to be done without providing a rationale? Unfortunately neither the theoretical bases nor the assumptions of Dr. Bereday's own position are made explicit and hence his own philosophical commitment and point of departure (unless it is the politics of education) cannot be readily discerned. The use to which this book can be put is consequently less. It does not provide all aspects of a method on the basis of

which explanatory studies can be attempted, the dynamics of social and educational change investigated and the difficulties of making educational terms meaningful across national boundaries met.

In general, it is a generous book. For his own part this reviewer has found collaboration with Dr. Bereday both stimulating and informative. Both qualities are to be found in *Comparative Method in Education*.

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THE i.t.a. READING EXPERIMENT

John A. Downing.

London: Evans Brothers for the University of London Institute of Education, 1964, 143 pp. 10s.

The use of Sir James Pitman's Initial Teaching (Augmented Roman) Alphabet has been the subject of widespread attention and reporting. The present work is a compilation of three of Mr. Downing's lectures concerning the use of this alphabet in the infant schools of England and Wales. Such research has also spread to the United States. Reference is made to work of this nature being conducted (at the time of publication) in at least seven states, in one case with a grant of \$148,000 from the Ford Foundation.

Although Mr. Downing constantly tempers his reporting with notes of caution, the reader is left with the overall impression that the i.t.a. has, "so far," been proven successful and that examination of more complete data at a later date will undoubtedly substantiate such results even further.

Much of the data and discussion (together with pertinent italicized headings and graphs) is substantially repeated in each of the lectures. Although

Mr. Downing claims there are many questions still to be answered, the reader is left with the impression that he is confident of the answers. This reviewer cannot claim the same degree of confidence. Such hesitancy arises from questions concerning both the theoretical considerations advanced in support of the "new" alphabet and the implications of the results so far reported.

As Mr. Downing aptly points out (p. 127) the i.t.a. differs from t.o. (traditional orthography) on several dimensions. These are:

1. "the use of lower case letters only,"
2. "consistency in signalling phonemes consecutively from left to right in their temporal order,"
3. "new characters replacing combinations of characters in t.o.,"
4. "reducing the number of other alternative print-signals per phoneme."

With reference to the first of these it is suggested that "It seems likely that the average of at least three different visual patterns for each single word (in t.o.) is a serious source of difficulty for the beginner, and that the "Look-Say" teacher's aim of establishing a clear visual image of each word or sentence may be frustrated in two ways:

1. The inconsistency of visual pattern may disturb the formation of the visual image.
2. The use of several patterns for a single word means that no pattern receives the maximum possible frequency of repetition." (p. 7)

No evidence is advanced to support this conclusion. This statement of Durrell however may be pertinent to the question. "All children (referring to 2,000 first grade children involved in four studies) were able to match capital letters as well as lower-case letters. Exer-

cises in this ability should be omitted from reading readiness materials."¹ Perhaps a simple test of letter recognition for Mr. Downing's controls might provide a more specific answer to his hypothesis.

Just the opposite problem occurs in connection with the i.t.a. symbols themselves. Examination of the Pitman alphabet forces the reader to inquire whether the child is actually discriminating among the symbols for the digraphs in *that*, *thin* and *hash* (*th*, *th*, *sh*). Downing reinforces this question himself by stating, "The aim in letter designing and in spelling has been to leave the 'top coast line' of printed words and sentences undisturbed as far as possible so that the main cues used by the fluent reader may remain the same." (p. 21) The question that obviously occurs is: does the child really see a new symbol or rather does he see the significant portions of the traditional letters t and h in *thin* and *that*. A closer look at the i.t.a. orthography suggests that in most cases the latter is in fact the case. For example the essential elements of the letters a-e appear in the i.t.a. æ, of e-e in €€, of oo in Ω and so on. If this is indeed the case, then cannot the same results be achieved by the use of a simplified spelling system in initial reading instruction?

If this is not considered an adequate procedure then can we not say that the suggestions of Bloomfield, as developed in the materials of Daniels and Diack in England and of Walcutt and McCracken in this country, reduce "the number of other alternative print-signals per phoneme"? Mr. Downing even suggests the necessity for compar-

ing such materials (as well as a simplified spelling approach) with i.t.a., but his definition of the characteristics which might form the basis of such a comparison seem contradictory. He contends that

Pitman's i.t.a. makes a direct attack on those two features of the standard alphabet which appear to be the root of failure in learning to read the phonic way:

1. i.t.a. has enough characters to provide one printed symbol for each of the phonemes of English.
2. Each character in i.t.a. carries only one single value for Phonic word-building. (p. 18)

On the other hand we find the statement that

... the i.t.a. code used in our experiment cannot, ... be said to be a perfectly constant visual code for the speech of any individual subject in our experimental sample. For example, although the letter *e* in i.t.a. generally represents the vowel phoneme common to words such as *egg*, *get*, *hen*, *bed*, it may also be used to represent the vowel phoneme common to words like *equator*, *hated*, *blasted*, *raided*. A third use it has is to represent the vowel phoneme common to words such as *kitten*, *fatten*, *listen*, and a fourth use (at any rate in speech other than Scottish) in *her*, *fern*. (Dialectal variants alone will always violate the consistent representation of phonemes.) Thus although i.t.a. removes the many gross ambiguities of the t.o. code it still retains sufficient variability to allow training in flexibility which may be transferred to coping with this quality in t.o. at the later stage. (p. 130)

But how much variability is sufficient and cannot such variability be provided

¹ Durrell, Donald D., "First Grade Reading Success Study: A Summary," *Journal of Education*, Boston University, 140 (February, 1958), p. 5.

by an appropriate selection of words printed in the traditional orthography?

Indeed the use of such materials would eliminate one obvious problem raised by the use of i.t.a., that of making the transition to t.o. Although the evidence reported in these lectures does suggest that most children will make this transition easily we do not yet know whether others will encounter substantial difficulty. Nor do we know whether such transition will entail later spelling problems. The fact that in i.t.a. *one* is spelled as *wun*, *said* as *sed* and *rain* as *ræ n* suggests that significant problems may well develop. That "Free writing . . . (was) more correctly spelt than is usual for young children" (p. 125) does not really suggest that spelling problems will not arise, for the i.t.a. children will be continually reinforced for i.t.a. spellings while other children will be reinforced for traditional spellings. Firm conclusions must, of course, await the results of the research, and Mr. Downing clearly recognizes the need for follow-up data in such areas as spelling and for further consideration of the theoretical issues involved in the use of i.t.a.

For the present we can only consider the tentative conclusions available. However the basis for even these tentative conclusions is often unclear or questionable. For example, reference is made to the fact that the use of i.t.a. appears to result in improvements in creative writing. It is hard to believe that the child is required to reproduce a character such as *ig*, yet no indication is given as to the type of characters used in such writing.

Again, the author states that there was "careful matching of experimental and control classes" and, several tables are provided to support this contention. There is also a disclaimer that, since final matching was not completed at the

time of this report, the classes were not matched as precisely as desirable. On the other hand, there is no explanation of the matching procedure used, the nature of such lack of precision or the reason for the constant numerical superiority of the control group. Since it would seem desirable to obtain parents' approval for an experiment of this nature one may inquire whether this was a factor in determining the numerical discrepancy between the experimental and control groups. Such a condition would make the experimental group at least partly self-selective and thus enhance the possibility of a Hawthorne effect.

An attempt has been made to compensate for this effect but here again there are unanswered questions. On the one hand meetings and courses are provided for teachers of control classes as a balance to i.t.a. workshops. But there is no indication of the content of such meetings and courses. Is there any attempt to *alter* and *improve* the teaching of t.o. or are these just a rehash of timeworn practices? The fact that the teachers *discussed* "the reading research" suggests that it might well have been the latter. The reader should also consider the fact that parents of children studying i.t.a. attended Parent-Teacher meetings, were encouraged to provide i.t.a. books for their children, etc., all of which would tend to enhance the possibility of a Hawthorne effect.

Questions such as these are important in evaluating the significance of any results obtained in research with i.t.a. But what are the tentative results and how important are they? The major findings may be summarized as follows:

1. A significant improvement in reading attainment.
2. Progress is more rapid in i.t.a. classes.

3. The slow learners make better progress with i.t.a.
4. Indications are that transition to t.o. is "likely to be achieved without difficulty."

Discounting for the moment the possible effect of the experimental situation, let us briefly consider these findings. Rapid and widespread progress, which is reported, is an important consideration. But what of the child who does not make progress with i.t.a.? Will there be some among these who could have learned with t.o.? It is interesting to note that although i.t.a. begins with a large number of children achieving greater success, as time progresses the tables show t.o. closing the gap. Over the long haul will i.t.a. or t.o. produce more non-readers and which will produce higher reading achievement?

With reference to the transition to t.o., the indications are that some children have accomplished this with ease. How many others will have difficulty in making the transition? Pitman claims that children will correctly guess from the context those i.t.a. words which are quite unlike their conventional form. Will this not pose even greater problems for some children than learning to perform a somewhat similar task with traditional orthography. The final *e*, for example, is a very reliable cue, useful in a large number of words, yet the i.t.a. child will find all these words unfamiliar. Whether it is better to provide initial training with regular or variable materials and how much regularity or variability to maintain has been referred to above. The findings in this field referred to by Mr. Downing do not seem adequate for a definitive conclusion at this time.

In any case it seems reasonable to assume that there will be children who will encounter difficulty in transferring

from i.t.a. to t.o. and in working with t.o. at a later stage. All this adds up to the conclusion that any evaluation of the overall effects of i.t.a. instruction on reading ability and any comparison with present (or improved) instruction with t.o. cannot truly be made until i.t.a. has been in use for a substantial length of time.

With reference to the time at which reading instruction should begin, Mr. Downing appears quite impressed by the fact that children can learn to read at 4 or 5 years of age, and do so with the use of i.t.a. materials. As far back as 1937 Gates had come to a similar conclusion but raised the still unanswered question of the desirability of such early instruction.²

As for side effects such as improved attitudes to school work, greater interest in reading, etc., these might be expected to accrue from any successful learning experience. The basic question is whether such an experience in learning to read can be achieved more successfully with the i.t.a. than with a more deliberate selection of words printed in the traditional orthography. The fact that previous systems which involved the use of an augmented alphabet met with tremendous initial success only to be shelved after several years suggests that the final effects must be very carefully evaluated. Mr. Downing makes reference to such previous experiments but his evaluation of their differences is far from convincing. His objection that a "Nue Speling" version retains combinations of letters (e.g., *th*, *ch*, etc.) for single sounds should be viewed in the context of the previous discussion of i.t.a. letters. Other than

² Gates, Arthur I. "The Necessary Mental Age for Beginning Reading." *Elementary School Journal*, XXXVII (March, 1937), 497-508.

this type of objection, he provides no information in this book as to the reason for discontinuing previous systems of this type. Whether Augmented Roman is destined to become simply another such item of historical interest or a tool of practical value remains to be seen.

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CONTEMPORARY RESEARCH ON
TEACHER EFFECTIVENESS.

Bruce J. Biddle and William J. Ellena.
*New York: Holt, Rinehart and
Winston, 1964. 352 pp. \$5.00.*

Eight of the nine chapters in this volume are revisions of papers delivered in 1961 to a seminar on teacher effectiveness, convened by the Department of Classroom Teachers of the N.E.A., the National School Boards Association and the American Association of School Administrators. The value of publishing a report of a seminar is that the reader may profit from the confrontation of critic and writer as they engage in questioning the relevance or interpretation of a piece of research, point out ambiguities and request clarifications. However, nothing of seminar proceedings is preserved in this volume. What we have are solos that have already been heard. At least five of the seven research reports have been in the literature for some time.

Bruce Biddle (Missouri) in the opening chapter labors to integrate the contributions. He presents what he calls "A Seven-Variable Model for Teacher Effectiveness" "for its methodological and practical implications" and uses it "to summarize the other chapters in the volume." (p. 5) The "variables" in the "model" fall into two classes; the *main sequence variables* which are formative

experiences, teacher properties, teacher behavior, immediate effects and long term consequences; and the *contextual variables*, which are classroom situations and school and community contexts. What he calls a "model" is simply a check list of virtually *all* possible influences that could bear on teacher competence. Presumably, anything in the life history of the teacher that is related to the performance of the teacher's role—from toilet to teacher-training—could fit into his scheme.

There may be some value to inclusive check lists to remind us of the diverse influences on teacher behavior, but what we need more in order to attend to the business of educating, evaluating, and changing teachers is assistance in identifying what is both *most* relevant and accessible to professional concern. Mr. Biddle's "model," couched in scientific jargon, does not appear to this reviewer to be of much value for generating hypotheses, comprehending or utilizing the available research, or for solving practical field problems. His chapter does include a survey of research techniques that should be interesting to those unfamiliar with social-psychological research.

The second essay, "Evolution of Current Practice in Evaluating Teacher Competence," by Hazel Davis (NEA), includes a short, somewhat disorganized history of the teacher evaluation which she relates to the efficiency movement in American education, a thesis that has been ably documented by Raymond Callahan in *Education and The Cult of Efficiency*. The major portion of her essay is given to reporting several surveys of rating scales and evaluation procedures used by schools since 1915.

David Ryans' chapter is a summary of his ten-year study on teacher characteristics published in 1960. In compressing his massive study into a few pages

he has omitted so many of the procedural details that it is difficult to understand or interpret his findings. Several scores or ratings were factor analyzed but it is impossible to say what went into the analyses and what came out, since no techniques or tabular results are reported. Ryans' work is too well known to require much comment. This reviewer questions the value of studies that focus on gross judgments of teachers' personal characteristics rather than on more molecular aspects of teachers' and students' classroom behavior, and their relationship to student learning. It is ironic that Ryans' essay probably has greater immediate value to the field than any of the other contributions. Researchers may pull their hair but school administrators will rely on gross-dimension rating forms until they see something better that they can easily comprehend and use. While behavioral observational systems look promising, they are not in general use probably because they all still do not deal with a sufficiently wide range of behavior or they are too cumbersome for field use. Since we will be saddled with rating forms for a long time, users could learn a great deal from Ryans' careful attention to such matters as training of observers and reliability.

R. L. Turner's (Indiana) paper reports on a novel strategy for measuring teacher competence. He asserts that past failures of studies of teacher competence are in part due to "uncontrolled variables." He suggests that researchers in the area should emulate the experimental psychologists by contriving "situations with demonstrated relevance to teaching." (p. 103) The constructed situations that he and his colleague N.A. Fattu devised are paper and pencil and oral (by tape recorder) test items which are reported in the most general terms. In no way are we told precisely what

variables are being systematically controlled in the "experimental" situation, throwing some doubt on their analogy to experimental psychology. Relevance to teaching is demonstrated by showing that non-teachers, teachers in training, teachers, teaching specialists (e.g. reading specialists), obtain significantly different test scores. But Mr. Turner does not demonstrate a relationship between successful test performance and successful teaching performance. If group A, reading specialists, obtain consistently higher scores than group B, elementary school teachers, this may indicate that group A knows how to answer questions *about* teaching of reading but does not demonstrate that individuals in group A are better reading teachers. Turner must show that performance in the contrived situation is related to *classroom* performance and to student learning.

Milton Mieux and B. Othaniel Smith report on their work at Illinois. Smith's empirical study of the logical dimensions of teaching behavior is a refreshing departure from the almost complete concentration on socio-emotional factors and communication patterns by researchers trained in psychology and sociology. This research originally reported in an Office of Education study dated 1959 had a number of shortcomings; for instance, category definitional problems, reliability difficulties, lack of any study of validity, failure to look at logical dimensions of teaching in the various subject matter areas, and failure to relate his dimensions to social psychological factors. These problems remain, and it is disappointing that the chapter in this book merely reports the same study, indicating a lack of attention to these problems over the last six or seven years.

The studies reported by Paul V. Gump (Kansas) focus on "the teacher's ability to develop an effective en-

vironment for learning." (p. 165) In contrast to Turner, Gump's position is "the isolation, manipulation and measurement of very specific variables, as in traditional experimental psychology, may be neither feasible nor fruitful." (p. 168) Gump argues and cites some evidence to support his contention that variation in setting, e.g. type of activity, physical arrangement of the situation, format of lesson, are important to the teaching situation. But Gump has not as yet shown that these are related to the logical dimensions of teaching or have any effect on pupil learning. This reviewer agrees with Gump that these variables have been ignored in research on teacher effectiveness, but until we have some way of knowing, for example, which formats may be most effective for particular types of learning, the research can be of little help to practitioners. Principals and supervisors often judge teachers according to such questions as: "Is the class environment conducive to learning?" or "Was the choice of activity appropriate for the expected learning outcome?" Gump's research is interesting, and if he does not ignore relationships to student learning, he may be able to provide clarification, specification, and assessment of the importance of such factors.

Ned Flanders (Michigan) reports research completed and reported over five years ago. His contributions to the techniques of classroom observation, and his efforts to relate teacher and student classroom behavior to learning are widely known by all researchers in this area. It is impossible to support in this brief essay, but this reviewer is convinced that Flanders' conceptualization of classroom interaction into the direct-indirect continuum has oversimplified the teaching process. Moreover, as B. O. Smith argues, behavioral category sys-

tems for the classroom must include logical dimensions of teaching, if these systems are to be used to evaluate a teacher's effectiveness.

The final two chapters, "The Role Approach to Teacher Competence" by Howard A. Rosencranz (Missouri) and Bruce J. Biddle, and "Age, Teacher Role, and Institutional Setting" by Warren A. Peterson (Community Studies Inc., Kansas City) can be classed together as broad sociological studies of school-community relationships and generational differences among teachers. While it can be argued, as does Biddle, that such factors impinge on teacher effectiveness in the classroom, neither article ties its findings to the logical or social psychological dimension of teaching, or pupil learning. These studies perhaps make some contribution to the social sciences, but they have only the most indirect bearing on the study of teacher competence.

Now to comment not on the separate contributions but on the purpose of the entire volume. Mr. Biddle in his first chapter says "although the educator will find here a tapestry of ideas, the basic message is for the educational researcher." (p. 2) Yet in the preface which is attributed to Mr. Biddle and his co-editor, this statement is found: "The book . . . is directed at two audiences, concerned educators and lay persons who want to do something about our understanding of teacher competence and educational researchers who would explore new approaches to this age old problem." (p. viii) The difference in these statements is not in itself very important but the confusion they betray is reflected in the book itself. Certainly it is possible for one book to be appropriate for both audiences, but this one is not. As a report of research it does not provide the information researchers need,—specification of experi-

mental conditions, instruments, statistical techniques. Most of this information no doubt can be found in other published works. True enough. But the fact that most of these papers can be found easily in the library in more complete form attenuates the argument that this is a book directed to researchers. If the volume reported critiques of the papers by the various participants this no doubt would be of interest to many, but as already noted, this was not done. As a readable book suitable for interested educators, administrators, teachers, or laymen, with some exception (e.g., sections of Flanders' and Ryans' papers), it is likely that the substance and style would ward off all but the most persistent.

Finally, this reviewer cannot resist commenting on the definition of teacher competence found in this volume which is probably not shared by all the contributors. Mr. Biddle in his initial essay and again later with Rosencranz defines teacher competence as

... the ability of a teacher to behave in specified ways, within a social situation in order to produce empirically demonstrated effects approved by those in the environment in which he functions. (p. 241)

Defining competence is risky business and these writers should be commended for facing the task. Nevertheless, this reviewer finds this definition profoundly disturbing. There are many Miss Joneses who according to this definition are competent because they achieve the ends of a run-of-the-mill history course, ends that the administrators and local community support. And we should be forced to call Socrates and lesser known teachers "incompetent" because their choice of ends jars the sensibilities of the authorities or because their ends may be only partially realized. The

problem is admittedly not a simple one, but this reviewer is not ready to regard competence as a mere technical question of how best to achieve X. The definition of the competent teacher must include the ability of the teacher to make wise decisions about what the X should be.

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LANGUAGE TESTING: THE
CONSTRUCTION AND USE OF
FOREIGN LANGUAGE TESTS.

Robert Lado.

*New York: McGraw-Hill Book Co.,
1964, 389 pp. \$6.00.*

This is a book written primarily for teachers of foreign languages. Its major interest lies in the testing techniques which Professor Lado, Dean of the Institute of Languages and Linguistics at Georgetown University, proposes and evaluates. But foreign language teaching and testing should be sensitive to linguistic developments, and Lado's proposals exhibit little relation to recent advances in linguistic theory.

Language Testing claims to be "a comprehensive introduction to the construction and use of foreign language tests." (p. vii) Not only is the book comprehensive, it is even ambitious since, in addition to treating foreign language testing *per se*, there are sections devoted to the discussion of linguistic and psychological theory, the design of teaching experiments, the testing of cross-cultural understanding and attitudes toward society, and to questions concerning the breadth of education itself. These topics are arranged roughly as follows: first, a theoretical discussion of language testing, linguistics, and psychology; second, the testing procedures for separate elements

of a language (pronunciation, stress, intonation, grammar, vocabulary); third, the techniques for testing integrated linguistic skills (comprehension, reading, writing, speaking, translation); fourth, the testing of cross-cultural understanding, and fifth, the refining of tests.

The book is of especial value when it deals with the testing of recognition and comprehension where, it should be pointed out, the reliability of the testing procedures has been determined. Similarly, the concept of "partial production," dealing with the group testing of speech production, is an outstanding contribution. Lado's suggestions concerning the testing of speaking ability, although avowedly rudimentary, are the best in print. To my knowledge, there is no other mention of procedures for testing intonation in the literature. The book is primarily a reference work and, as such, the chapters on norms, validity, reliability, item analysis, and equivalent forms will prove convenient although Lado has little to say about these subjects that is new. Bibliographical notes follow most chapters, but, unfortunately, there is no index. Nonetheless, as a textbook for foreign language testing or as a reference work, Lado's book is a genuine contribution which will be of assistance to the conscientious, progressive, and ambitious teacher who has some linguistic training and who is willing to consider new ideas.

With respect to linguistic theory, Lado claims to have based his book on "... present linguistic understanding of language..." (p. 22); yet the reader readily observes that this "linguistic understanding" is nothing more than the Bloomfieldian taxonomic linguistics, an approach to language study which, until fairly recently, has completely dominated American linguistic studies. Lado almost completely ignores

the achievements of transformational linguistics, making only one rather trivial mention. (p. 163) Giving Lado the benefit of the doubt, one might construe some of his remarks as underlying an implicit mentalistic view of language. "We can . . . speak of language as a . . . system of habits..." (p. 4) "Major progress (as a child learns) comes in the form of pattern learning, that is, learning sentence and word patterns which permit him (the child) to build new sentences by analogy." (p. 12) We might interpret Lado as saying that the child has internalized a set of rules which allows him to construct and understand sentences.¹ Lado goes on to say that "when he (the child) has learned to build new sentences . . . he has learned the language." (p. 13) Thus, testing the "conversion of one pattern to another" (p. 169) may be construed as testing the presence of an internalized rule in the child's mind. Presumably, it is in word and sentence patterns, and the rules for characterizing them, that "we sense the common basis of language within the diversity of languages. . . ." (p. 8) But it will take no small amount of insight on the part of linguists to reveal just how languages are alike.

On occasions Lado fails to take important recent investigations into account. For instance, Halle and Chomsky of MIT have given a quite convincing argument that stress in English is predictable on the basis of grammatical structure. Lado, without offering justification, makes the claim that "... although / ' / and other stresses correlate with grammatical structure in English,

¹ Actually the child seems to learn extremely general rules which he modifies in stages, gradually coming to note lexical restrictions. The notion that children learn by pattern or analogy is, of course, not original here.

stress and grammatical structure are autonomous systems. . . ." (p. 107) Lado is factually incorrect when he states that ". . . English weak stress is not paralleled by any stress in Spanish. . . ." (p. 109) On the contrary, the weakest stress in Spanish has the same amplitude and length as the weakest in English, but English contains a rule for reducing unstressed lax vowels to [ə] whereas no such rule exists in Spanish.

In discussing the construction of a test to be employed in foreign language teaching, Lado outlines the following *desiderata*:

- (1) Make or get comparable descriptions of the student's native language and the target language,
- (2) Analyze the descriptions contrastively and prepare a list of learning problems,
- (3) Collect test items and separate them according to appropriate test techniques,
- (4) Write test items and prepare instructions,
- (5) Administer to native speakers of the target language in order to discover unwanted items,
- (6) Administer to a representative group of students in order to discover the relative difficulty of items,
- (7) Administer to an adequate sample of students so that norms may be computed, and
- (8) Publish in booklet form with answer sheets and perforated scoring stencils.

With the exception of the contrastive analysis of linguistic descriptions, the steps which Lado proposes seem reasonable. But it is simply a matter of fact that the construction of contrastive analyses is an extremely complex affair which, except in rare instances, will be an impossible undertaking for the linguistically unsophisticated teacher of

foreign languages. Since the learning problems resulting through contrastive analysis must be checked against empirical observation anyway, (p. 149), one suspects that the list of learning problems might be prepared entirely as a function of empirical observation. Even this compilation, however, will require a certain amount of linguistic training.

There is justification for great care to be taken in the use of linguistic analyses in the teaching of foreign language. Although the transformational approach to language may ultimately yield a unique linguistic description for a given language, it is certainly the case that no two structural or traditional descriptions of the same language are the same. How then can the teacher have any confidence in any particular contrastive analysis? Most teachers of foreign language, even those trained in linguistics, use the more direct empirical approach to the listing of learning problems, and Lado fails to mention anywhere in his book this alternative to contrastive analysis. One will perhaps assert that such a procedure is unscientific, but it is not at all obvious that any allegedly scientific descriptive techniques have yielded unequivocal results.

Lado is quite correct in pointing out that "... too much has been made of the value of a native speaker of a language as the ideal teacher." (p. 47) Besides the fact that it is not feasible in most cases to have the use of native speakers of the language to be taught as teachers, there are certain advantages which the non-native speaker of the foreign language has over the native speaker. In particular, non-native speakers are invariably more sensitive to many of the problems which students encounter when they are trying to learn a language.

Typical of the many linguists who begin the study of a language with its

phonology, Professor Lado lays heavy stress on pronunciation, e.g., a sample five-item test treats segmentals, stress, intonation, structure, and lexicon. (p. 211) Sixty per cent of this test ranges over pronunciation. One might suspect that insofar as the goal of foreign language teaching is the automatic control of the mechanics of the language in the free expression of ideas, the undue emphasis on pronunciation may have detrimental effects. The student, in such a situation, becomes self-conscious, loses confidence or becomes hypercritical of others, and thus frequently destroys his control and his budding ability to communicate. Furthermore, except in rare instances, perfection in pronunciation is almost impossible to obtain and is overly demanding of student and teacher time.

The aim of foreign language teaching must be to inculcate the entire language system, i.e., the syntactic, phonological, and lexical rules underlying the sentences of the language. My suspicion is that students should be exposed to as much of the language at once as is possible. In great measure the student must extrapolate and internalize the rules of the language for himself (except where direct instruction in the operation of the rules may have immediate pedagogical value) and this process is probably facilitated by presenting the entire language picture, or at least large areas of it, at the same time. There is no reason I know of which suggests that teaching phonemic distinctions and drilling on

minimal pairs is an optimal method for teaching a foreign language.

Lado presents his own explanation for how people learn a foreign language. (p. 17) But little is known about the way in which people learn a first language, let alone a second language. There is little more to be said at the current time save that human beings must have the inherent capacity to determine the set of abstract linguistic rules capable in principle of characterizing the infinite set of sentences in any natural language. While I do not mean to depreciate the possible pedagogical value of electronic equipment and programmed instruction, it would appear that only intuition and not linguistic science underlies the teaching techniques in which these devices are employed. Although certain new linguistic advances, for instance, the transformational approach to language study, seem to offer a better theoretical base than other types of linguistic investigation, the foreign language teacher can only adopt a "wait and see" attitude. Perhaps, after all, he has been teaching a foreign language "the right way" all along.

In conclusion, Lado's book offers a wide range of testing procedures for use in the teaching of a foreign language. No doubt many of the techniques proposed are and will be of great value, despite the book's inadequate theoretical perspective.

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The authors examine the interaction between education and politics in the new nations. They give particular attention to the tendency of education to induce political instability—as well as stability.

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Education and Politics in Developing Countries

Education and politics are inextricably linked. A government's education policy reflects, and sometimes betrays, its view of society or political creed. The formulation of policy, being a function of government, is essentially part of the political process, as are the demands made on government by the public for its revision. And the implementation of education policy has political consequences by affecting, among other things, types and levels of employment, social mobility, and the ideas and attitudes of the population.

Such links seem obvious when they are stated. They exist universally but tend to be obscured in societies which are both well-educated and politically stable, especially if education is locally controlled and ostensibly non-partisan. In general, the political significance of education in contemporary societies increases with the degree of change a society is undergoing. The massive changes which developing countries have already experienced and those, whether induced or not, which are in process, render all the more conspicuous the reciprocal relationship between politics and education in these areas.

Impressive evidence of this relationship may be found in the progress of colonies towards independence. The contribution of Western education to the eclipse of Western colonialism is now fairly well understood, at least schematically. The crux of the matter is that the successive generations of men

who became nationalist leaders had attended colonial schools and metropolitan universities. The values, the vocabulary, and the organizational methods they derived from the political traditions of the West were employed, successfully in the long run, in combating colonial rule.

This revolutionary role of education was neither intended nor foreseen by the colonial educators of the nineteenth and early twentieth centuries from whom the nationalists had received their schooling: missionaries who taught primarily in order to proselytize, and government officials who generally believed they were training indigenous subalterns for the colonial administration. Yet the unintended consequences of their educational labors have been, from a political point of view, the most important ones.

This lesson, learnt reluctantly and sometimes too late by the colonial powers, may yet apply equally to the newly-independent countries. Most nationalist leaders, once in power, have employed mass education in their campaigns to eradicate ancient antagonisms of tribe, religion, and class, and in general they regard schools and colleges as primary means of building their new nations. Constructing schools is one way in which the leaders may commend themselves to their constituents; indeed, for many rural communities, a school is the only sign that government is doing anything at all. But the stresses and tensions of the pre-independence period may be aggravated by the programs of educational development carried out, often with the best of intentions, by independent governments. Burgeoning educational opportunities may produce new challengers for positions of power or rebels against social order, and by accentuating old rifts or opening new ones impair the attainment of national unity. Having helped to unseat the empire-builders, the spread of education may well conspire against their nation-building successors.

Whether or not education has all the disruptive consequences of which it is capable depends upon those who shape policy: the planners, advisers, civil servants, and politicians—not to speak of the parents of school-children, teachers' organizations, religious and student bodies, and others whose influence on policy is seldom negligible and sometimes decisive. Such groups do not necessarily conceive their interests in terms identical to the government's, and policy must be formulated by discussion and compromise, sometimes by the exertion of governmental authority and sometimes by capitulation to public or sectional demand. In this process the long term political consequences of policy may be lost sight of or evaded. It should be a responsibility of planners and advisers to acquaint themselves with the political ends the government intends the education system to serve, and to point out to government the effects, for good or ill, which may be expected to follow from alternative courses of action.

The ensuing discussion will proceed by generalizations which may not apply universally but which do indicate a wide range of relationships. The effect of education upon political behavior, the political role of teachers, and educational issues of political importance will be considered in turn. "Education" will refer to the school and university system under government control or supervision. "Politics" will be taken to mean: 1. activities focussed on the acquisition and use of power through control of institutions of government, 2. activities in which public issues are discussed and demands upon government expressed, through parties, interest groups, mobs, or solitary individuals, 3. actions of the formal institutions of government, which make laws, interpret them, and attempt to carry them out through a bureaucracy.

EDUCATION AND POLITICAL BEHAVIOR

Three aspects of this question will be considered in detail: group attitudes, unemployment, and the political role of the intelligentsia.

Group Attitudes

Significant differences between population groups in educational opportunity and attainment are often reflected in the distribution of political and economic power and employment, particularly in the civil service. These inequalities have various causes. The former colonial powers in different situations favored both minority (or suppressed) groups and dominant groups when to do so enabled them to consolidate their power. Superior educational opportunities have thus enabled some formerly subordinate groups to leapfrog over their rulers or oppressors and gain prominence within modern political parties and the civil service, while elsewhere they have merely reinforced in the modern sector the power relationships of the pre-colonial order. In some societies culture and religion have predisposed certain groups towards Western education and alienated others from it. Invariably the latter groups have suffered a relative disadvantage on this account. The problem of group relations is particularly acute in such countries as Sierra Leone, Uganda, and Malaysia, where the adoption of universal suffrage has elevated the majority group in a population to political power, while minority communities retain their educational and economic superiority.

In all these cases, the power relationships among groups have been affected, often crucially, by the number of school-places respectively available to them and the intensity of their response to Western education. Certain groups, feeling themselves to be deprived of decent schools or to be the victims of cultural imperialism within the classroom, have pressed strongly for separate school systems, if only to preserve their group identity. Faced with threats

of violence from linguistic or religious minorities, some governments have complied with their demands, while others have insisted upon a uniform educational system in the hope of overcoming latent or actual social schisms.

The value of single school systems in plural societies is generally defended on two grounds: that they promote equality of opportunity for all groups, and that young people discover by studying together that their differences are less consequential than their common membership in society. The second argument is supported by circumstantial and scholarly evidence (though there is also evidence to the contrary). It is strikingly borne out by the histories of nationalist movements throughout the developing world, whose leaders, though drawn from different regions, religions, or tribes, have often been alumni of the same schools and colleges, and frequently became acquainted first as fellow students. Opportunities of this kind tend to diminish, however, as school systems expand, since the more they expand the more homogeneous are their units likely to be. It is becoming increasingly possible for a young person to proceed from junior primary school through college without leaving his home province or tribal area. As the civil administration and commercial enterprises expand in keeping with the country's development, it is likely that he will as often as not find employment in that region as well. In some countries this might be of no significance, but where parochial values and loyalties tend to be paramount, the expansion of education may indirectly strengthen tribalism or regionalism and retard the government's campaign to create a national society.

The schools, however, are valuable in other ways to a country's leaders in achieving this goal. It will be readily apparent to them that the school population is a large and vulnerable audience of considerable political importance. Half the total population may be under the age of twenty. Sending a large proportion of these young people to school directly promotes national unity, since it ensures that a significant sector of a diverse population is endowed with some common modern skills, attitudes, values, and tastes. In particular, the larger the school population the more people are brought within reach of government propaganda. Curricula may be designed which describe what ought to be believed about the country's leaders, the colonial past, the constitution, the dangers of sectionalism, the national culture, the need for development, and the students' own civic responsibilities.

Few developing countries thus far, however, have made a comprehensive and sustained effort to remake the curriculum, though key sectors such as history and civics have frequently been attended to. Even where the government favors it, the inertia of the previous system must first be overcome. This implies at least producing new text-books and indoctrinating the teaching force.

Most young people receiving an education do not advance beyond the primary schools, which are generally poorly staffed and parochial in atmosphere; these children receive, therefore, a confused idea of the nation and their place in it. Propaganda or civic instruction is likely to be more effective in secondary and higher institutions, which only a small proportion of eligible children attend. Even here, however, nationalist propaganda may be so crude or so dull that it calls forth little sense of commitment from the students, though they may pay lip-service to the current slogans. Whether the nationalist message is imparted or not depends largely upon the attitude of the teachers, among whom many may not support the regime. Such teachers are unlikely to use their classrooms, except under compulsion, to teach political ideas with which they disagree. Instead they may well communicate their own discontents to their students.

Regardless of the difficulties, as their resources increase and perhaps also in response to political unrest and disaffection, more governments may be expected to mount a campaign through the schools to attach young people to their views about the nation and the duties of citizens.

Unemployment

The relation between education and unemployment is complex. It hinges mainly on the fact that in societies where most adults have been subsistence farmers for generations, education makes young men disinclined to follow their fathers' occupation, and also on the anxiety of parents to ensure that their children have a better lot in life. The inculcation of personal ambition is one of the most radical innovations for which education is responsible. Nevertheless, if there were enough satisfying alternatives to subsistence farming, the ambitions of rural school-leavers would not necessarily precipitate a serious unemployment problem; but in few developing countries do these alternatives exist. For instance, the obstacles confronting a young school-leaver who wishes to farm for cash are formidable. They may include overcrowding of the land, traditional systems of tenure which give no scope to youthful entrepreneurs, a lack of private or public loan capital, and rudimentary transport and marketing facilities, any one of which is a sufficient deterrent. Other alternatives to subsistence cultivating are farm laboring and commercial or industrial employment. The wages of a farm laborer are, however, seldom satisfactory to a school-leaver (nor is the work generally congenial to him), and trade and industry in the rural areas can usually absorb only a small fraction of those who leave school there and want paid work.

The result is that a very large number of them sooner or later make their way to the towns, to escape the dead-end and dullness of subsistence cultivation and to claim the kind of employment they regard as their due. On the

latter score most are bound to be disappointed. Few of them have completed the primary school course, and fewer know a trade or have mastered a marketable skill. With bare literacy their only qualification, most are compelled to seek unskilled labor or none at all. Since it is becoming customary to enter school at an early age, increasing numbers of young people are disqualified from any position because of their youth. The same circumstances are true of town-bred school-leavers, except that their standard of educational attainment is generally superior to that of their contemporaries from rural areas. Of the thousands who cannot find work in town or country, most become loafers, dependent upon the hospitality of friends or relatives who are often the very people to whom they owe their schooling.

Some school-leavers are attracted to the political party youth brigades and serve as minor party activists, selling membership cards, collecting funds, spreading political news or instructions, and controlling crowds at mass rallies. For some of these duties their schooling is useful. By performing them they are able to achieve a sense of station and self-esteem which otherwise is denied them.

It is frequently suggested that unemployed school-leavers are "political dynamite," the stuff of which revolutionaries are made. This may be so, but certainly not as a matter of course. Disgruntled and restless though they are, these school-leavers stand not at the center but on the perimeter of significant political events. The characteristic forms of political disturbance for which they are responsible are not revolutions but acts of arson, assault, and intimidation directed against political opponents. Disrespect for law, property, and the person may have been encouraged by their political leaders before independence, and paid political dividends then, but in the post-independence period of reconstruction and development such behavior is generally regarded by the leaders as a liability. It is, however, the actions of such young criminals and disturbers of the peace which emphasize to the public and the government the gravity of the problem of unemployment, not the more numerous and equally unfortunate unemployed who simply vegetate in town and country, return reluctantly to their farms, or, as some do, withdraw pathologically from the struggle.

Unemployment sets a crucial test for the governments of developing countries, as the very success of the education system in turning out literate young people directs attention to the necessity of using them productively. Many governments have responded imaginatively, introducing jobs-for-the-jobless schemes inspired by their commitment to development and their anxiety to channel the national enthusiasm of their young people. These schemes go under such names as "Pioneer Brigade" (in Ghana) or "Youth Service" (in Zambia); they may even be sponsored by a Ministry of Youth. They operate

in part as extensions of the education system by providing further education, training in a trade, or literacy instruction; they advance the development program through construction and agrarian projects; and they discipline an otherwise irresponsible section of the population.

Schemes of this kind are unlikely to absorb all the educated unemployed and may in any case simply postpone unemployment. Another possibility is that the civil service may swell noticeably in its lower ranks, posts being created in accord with "Parkinson's Law." Bureaucracies in developing countries are generally handicapped by having far too few people in their middle ranks (because the output of secondary schools is too small) and an excess in the lower ranks. Enlarging the latter category is bound to make administration more cumbersome and inefficient. The inability of bureaucracy to meet the demands made upon it by political leaders is likely ultimately to have serious effects upon the political process itself, as citizens are tempted to act extra-legally to achieve what the government appears to have promised them but not delivered.

A more subtle and promising response to unemployment is one which attempts to check it by matching the output of skilled persons from educational and training institutions with the long-term manpower demands of the economy. Obstacles in the path of this attempt are chronic shortages of artisans, technicians, and skilled modern farmers and the legendary reluctance of educated people in developing countries to engage in what are usually called manual occupations. This has unquestionably been the case in the past, partly because of a lack of facilities for vocational education, but mainly because people made a realistic assessment of the road along which social, economic, and political advancement lay. It is possible that the legend is now in danger of being overtaken by events. There is evidence that secondary-schoolboys in some African countries (and university students in Latin America) tend to rate technical occupations more highly than before and that these occupations are eagerly sought after. The reasons for this very significant shift in attitude are perhaps the universal prestige and mystique of modern technology, the sophisticated facilities for technical training which are now in operation or being planned, and the increasing opportunities for well-paid skilled work as color barriers fall and industry expands. But what has probably been indispensable is the success governments have had in propagating the idea of development as the keystone of their ideologies. Without the fervor of a national campaign in which elements of national pride and national service are involved it is unlikely that matters would have proceeded very much further than during the colonial era.¹

¹ It is doubtful in any event that a similar occupational revolution has begun in agriculture, which provides a livelihood for most people but retains very few who are educated

The Intelligentsia

Unemployment among the educated classes is not confined to school-leavers, though in the developing world as a whole the problem is most acute among them. Several countries, particularly in Asia and the Middle East, have a vast and unrationalized system of higher education which produces a large proportion of graduates who are unable to find suitable employment. This situation is partly a function of economic capacity, but more importantly it is a result of their being taught in inferior institutions by poorly qualified instructors, according to curricula which bear little relevance to the needs of the countries and the kinds of work which are available. Like the other kind of jobless, these hapless graduates are of concern to governments, and similar methods of rehabilitating them are attempted. Inflating the civil service is one; retraining is another. Preventive measures are also afoot: compulsorily raising admission standards at colleges, increasing lecturers' salaries, reforming curricula, and—most significantly—expanding facilities for scientific and technological education and employment.

Meanwhile the students in these countries are often a political force of some consequence. Their working conditions are deplorable enough to cause chronic dissatisfaction and resentment, aggravated by the dispiriting knowledge that their ambitions are unlikely to be realized. They tend to blame their plight on the government in power and the privileged classes in general, especially since the students are themselves increasingly representative of all classes of the population. They are thus amenable to the persuasions of radical political organizations and can be readily organized for demonstrations, strikes, and mob action. This problem of "student indiscipline," both in and out of the classroom, has frequently disquieted national authorities and been a spur to educational reform.

In African countries, where there are fewer institutions of higher education and fewer high school graduates to fill them, such problems are unlikely to be as serious. The issue there is not whether college and university graduates with local or foreign training will be employed, but rather how their employment *en masse* in the upper ranks of the public service affects political life, especially in those states where the civil service and the national party are closely linked. A civil service composed largely of young nationalistic technicians may develop an extreme distaste for the older men who, though not specialists, hold important government posts. This sentiment will probably be reciprocated by the politicians, who view the new gen-

and mechanically skilled. This revolution may have to await some form of compulsory national service program, as well as radical changes in systems of land tenure and rural social organization, the pricing of commodities, and the provision of credit.

eration of technocrats as inexperienced and lacking real roots among the people. The situation is complicated by the fact that the "older" political generation is itself relatively young. Leaders in their late 30's or 40's foresee many years in power and are quite unwilling to turn over the reins to a generation which, even though better trained, did not share their struggle for freedom.

The danger in this situation is that the government will deteriorate as co-operation diminishes between the makers and implementers of law. On the one hand, the leaders in power form an increasingly entrenched and defensive elite, concerned more with preventing *coups d'etat* from below than with grappling with the substantive problems of development. On the other hand, the bureaucracy may become preoccupied with political intrigues within its own ranks. Numbers of ambitious young men compete with each other not only for top civil service posts but also for ministerial positions, basing their claims on professional competence rather than on popularity with the masses, with whom they have had little contact. The future may belong to the new generation. The question is whether it can attain power legitimately, and whether once in power it can govern with the masses' interests at heart.

Incumbent rulers may perceive a threat to their positions in another group of specially qualified intellectuals: professional men outside the civil service. These men—notably lawyers, religious leaders, journalists, and academics—may protest actions which appear to violate the civil liberties of the population and their own professional codes, and may become nuclei of opposition within or outside the dominant party. Depending upon how beleaguered the government feels, these criticisms may be tolerated—even heeded—or rejected as injurious to national unity and based on anachronistic notions of civic morality. The most effective sanction a government may level at professional men is to subvert them, by taking over or closely supervising their training, controlling their appointments, and censoring what they write, teach, or preach. Erring professions may thus be turned into branches of the civil service or the party.

THE POLITICAL ROLE OF TEACHERS

Teachers, and ex-teachers, have played a disproportionately important part in the politics of developing countries; in most African legislatures, for example, they constitute the largest vocational bloc. Because in earlier years the variety of jobs open to a man with some schooling was not great, especially where a color bar was enforced, and the educational qualifications required of prospective teachers were fairly modest, the proportion of white-collar

workers who were members of the teaching profession was considerable. Consequently teachers were conspicuous among those who became eligible for membership of legislatures as these were made increasingly representative, particularly when precise educational qualifications were demanded of aspirant legislators. Thus, a teacher's chances of becoming a legislator were statistically more favorable than the chances of those in most other occupations. In addition, as one of the few literate persons in a village or rural district, he tended to receive the respect of the local people because of the knowledge he possessed and because he was articulate and could defend their interests most convincingly before the authorities. In the towns, teachers frequently interested themselves in mutual aid and welfare societies, and became versed in methods of organization, committee procedure, and administration; these societies were in turn often the forerunners of nationalist political parties. A teacher could secure a local power base, located not least among his former students, gain experience in public affairs, and put both to good use when he entered politics. The teaching profession was a springboard for the potential politician, much as the legal profession is in some developed countries.

The teacher is politically significant not only as a direct participant in politics but as a crucial communications link between the modern elite and the mass of the people. As a group, teachers tend to occupy a middle position between the two. Their education raises them above the common man, yet they are too numerous, too geographically dispersed, and too disparate in educational accomplishment and sophistication, for all of them to be considered members of the elite. Between the small, urban, westernized group holding political power and other positions of authority and influence, and the mass of rural peasants and cultivators, there is frequently very little communication. The teacher straddles two ways of life. Through him ideas of nationalism may be transmitted from the political leaders and the press. He is often—whether or not this is legally permissible—a party activist involved in proselytizing, political organizing, and political education. And it may be that through him some of the less articulated needs of the rural people are made known to the leadership.

It is not always the case, however, that a teacher is able to establish this sort of close connection with the people. It is no doubt very rare for a teacher not to be used as a source of information about the world beyond, and especially as the interpreter of news from the mass media. But he is often acutely uncomfortable in his rural environment (which might not be the one in which he was raised), a stranger by birth or preference to local customs, and painfully aware of his isolation from other educated people. As the tutor of the young in admittedly necessary but unwelcome ways and ideas, he might encounter resentment and opposition from the elders of the so-

ciety. If his own political persuasion is different from that of his community, his alienation from that community is likely to be nearly complete.

In other ways the teacher's special status is a key to the malaise which currently affects the teaching profession in developing countries. With the introduction of mass education, the teacher's status tends to suffer a relative decline, because he is imparting to others the very skills which used to raise him above them. Moreover a rapid increase in school capacity requires a rapid increase in teaching personnel, and as minimum standards of entry are lowered to bring in many new teachers, the prestige of all teachers is apt to fall, not least in their own eyes. If large numbers of new teachers are not recruited, the chances are that class sizes will expand appreciably, or that the number of double session schools will be increased. Either way the teachers will be overworked. With the growth of local government, responsible for financing at least the primary stages of public schooling, the teachers may come to be regarded by the community merely as local employees and treated as such. And, following independence, as localization programs and a surge of development projects provide opportunities for new and lucrative posts in the civil and foreign services, industry, and commerce, many of the most competent teachers are attracted to them and leave the profession. This drainage is both a cause and an effect of the decline of the teacher's status relative to the administrator or the entrepreneur.

Although it is difficult to generalize about the political consequences of this decline, it is reasonable to suppose that if teachers are unhappy in their vocations, if they are not receiving from their government and the public the salaries, working conditions, and recognition they feel are their due, they are more likely to leave the profession, or devote their energies to raising its status, than "build a nation" through classroom precept and example. Teachers may be constrained from actively opposing the government, particularly if they are civil servants, but they can sabotage its long-run objectives by not conveying to their students in an enthusiastic manner those values which the politicians wish to instil in youth. The strike of their teachers' union, for higher pay, better pensions, more adequate housing, and easier work loads, is a more direct expression of disaffection which has been and will continue to be resorted to.

Thus the teaching profession presents a paradox. Teachers are indispensable to the nation-to-be. Their primary function is to instruct the young, and they are also a vital link between rulers and ruled. However, the very forces of mass education and democracy which are expected to advance the growth of national consciousness stimulate the alienation of the teachers from their government and seriously inhibit their role as mediators to the masses of national values.

EDUCATIONAL ISSUES OF POLITICAL IMPORTANCE

Education is a matter of fundamental public policy which represents more accurately than any other the conception a government has of society. This is especially true of the developing countries, where education policy must plot the most effective route by which traditional society becomes transformed. The issues which this policy thrusts into public discussion embrace some of the assumptions upon which the transformation rests and by which it is justified. Among these issues, and by no means exhausting them, are the questions of language medium, curriculum, religious schools, and post-primary education.

Language Medium

Few of the many possible solutions to the problem of the language of school instruction are satisfactory. In almost every developing country the population is linguistically diverse. Establishing any one of the vernaculars as a universal educational medium is likely to be greeted with indignation and resentment by speakers of the other vernaculars. Establishing each of them as the educational medium in its respective area, while satisfying many sensibilities, may invite difficult pedagogical problems in areas (especially cities) of mixed populations, and it will almost certainly perpetuate group insularity and hostility. Most indigenous languages, however glorious their classical past, have not made organic, spontaneous adaptations to the linguistic requirements of the modern world. New lexicons of technical and scientific terms and professional jargon must be contrived and teachers trained in their use, and these are drawbacks which are potentially crippling to a struggling education system. Nevertheless it is sometimes politically impossible for a country's leaders to dismiss the indigenous language from the schools, especially if (as with Arabic) the language is closely tied to the national religion and has achieved symbolic value in the anti-colonial conflict. Countries which do not possess local languages with developed written literatures have perhaps the easiest choice; this is the case in most of Africa, where the colonial language has become the official language and is retained as the medium of instruction in schools from the beginning of or from some point during the primary grades. But where indigenous literary languages have powerful support, as they do in India, Ceylon, and Malaysia, the retention of the language of the alien ruler for use at least temporarily in the higher levels of education, or the imposition of an indigenous but not universally known "official" language, are bound to provoke ardent opposition from cultural nationalists.

Though the language issue continues to excite political dissension in many countries, the spread of a single language through the schools can be of im-

mense value in promoting a national society and in facilitating the spread of political ideas and efficient administration.

Curriculum

Curriculum policy is a live public issue because it intimately involves the complex psychological relationship of the people in developing societies with Western culture. Schools and universities generally adapted from the metropolitan country curricula whose relevance to the indigenous society was often negligible, or when modified by expatriates for local use, unconvincing. Despite their inadequacies, the curricula achieved a symbolic value for the modern elites of developing countries, who had been instructed in them, and by mastering them had demonstrated their ability to match the Westerner on his own grounds.

Nevertheless there is a strong feeling among the leaders and leading educators that their societies can no longer afford irrelevance in school and university curricula. Where energies are directed towards the development of the country and the growth of a self-conscious and self-esteeming national community, the curricula must be de-colonized and nationalized, created by local experts to suit local circumstances and needs.

In this process attitudes have changed in interesting and subtle ways. In the colonial period, attempts to lend an indigenous and utilitarian color to the conventional curriculum were fiercely resisted by nationalist leaders on the grounds that special treatment implied their inferiority. Now that these leaders are in control of education the trend is toward change in this very direction, colonial curricula being regarded as a denial of nationality and insufficiently geared to the needs of development. But it is not surprising if the change has been too sudden to satisfy some of the intelligentsia who have a deep commitment to the alien culture and who fear for a decline in local standards. Often members of the public are likely also to resist, feeling that their children should not be deprived of the kind of education which has so obviously benefited their leaders.

Religious Schools

The existence of a Christian mission school system, which very often sponsors considerably more schools than the government, is a reminder to political leaders in developing countries of their colonial past. Church-State relations have been a lively issue in Western education, but they assume a new dimension in non-Western countries where mission schools, although part of the state system, may be directed and partly financed by foreigners. The future of the missionary contribution will largely depend upon the solvency of the government, the degree to which the people associate missions with the co-

lonial enterprise, the readiness of the missions to accept new curricula and official inspection, and their willingness progressively to relinquish control if the government favors the nationalization of schools in the long run. If the missions succeed in establishing their identity as a national institution, and if an indigenous religion is not bound up with the expression of nationalism, the Christian educational sector may find the government anxious to cooperate with it, rather than to eliminate it.

Paradoxically, though Christian schools may be tolerated or even welcomed, there is proceeding in several countries, notably in North Africa, a significant confrontation between the leaders of indigenous religious bodies who also control an extensive traditional education system, and the modern leaders in government. The latter cannot afford to permit a considerable proportion of their youth to be educated out of modern society. Nor can they afford to alienate entirely the religious leadership among whom a great deal of power over large sectors of the population still resides. It is rare for a ban on traditional religious schools to be declared; it is more usual for the government to suggest or sponsor some means by which the traditional system may be integrated in the modern system without detriment to religious values. The issue is not yet resolved, and its political implications are considerable.

Post-Primary Education

The planning of secondary and higher education is of vital significance for the efficient functioning of government and the maintenance of public order, since it relates closely to the problem of replacing expatriates in responsible positions in the public service and security forces with local men and women. It has repeatedly been made clear in a great many countries that localization is an issue of capital importance, capable of inflaming public feelings and driving governments into precipitate action in order to satisfy their constituents and their administrative officers. Dissatisfied junior civil servants may effectively express their anxiety for promotion by going on strike. Serious enough though this may be, junior officers and other ranks in the security forces are capable of far more radical and significant action. Being in possession of the only organized instruments of force in the country, the police and army are able to present their demands persuasively. Thus the government's staffing policy may provoke a breakdown in administration, martial law unlawfully imposed, or the overthrow of government.

In deciding the pace of localization the government is faced with a number of difficult alternatives. A gradualist policy would probably ensure that services were maintained at least at the level to which the country, under colonial rule, had become accustomed. But such a policy invites frustration

and rebellious protest and is moreover a severe challenge to the self-respect of an independent government. There is in addition the real possibility that popularly elected local Ministers might meet with less than enthusiastic cooperation from the senior and sometimes more conservative expatriate officials of their departments.

On the other hand, rapid localization (especially if it takes place under duress) is likely to cause dislocation and require the promotion of obviously unqualified people to executive positions. This could jeopardize the reliability of development projects, which, in turn, would be sure to disappoint and anger the public. It could mean, also, that public safety and the integrity of the state would be endangered if the security forces were reduced to incompetence. It requires a fine sense of timing and sensitivity to the moods of both civil servants and the public, to carry through successfully an entire program of localization.

The success of this program—both its speed and its effectiveness in maintaining efficiency and good order—depends ultimately upon the existing stock of secondary school and college graduates and the capacity of the country's education system to supply them at the right time with the right qualifications. Three issues are involved here: breaking the most pressing bottlenecks, reducing wastage, and improving the scope of the system so as to supply the most urgent needs of a developing country: for competent administrators, security force officers, civil engineers, technicians, artisans, public health experts, agricultural extension workers, and the like.

CONCLUSION

This discussion of the complex relationship between education and politics may have given the impression that education policy derives from various forms of political disorder, and that its consequence is the intensification of disorder rather than its elimination. This is only partially accurate, since any one country will seldom be afflicted by all the ills to which developing countries in general are susceptible. In any case the mainspring of education policy in most countries is less a calculation of political costs and benefits than the conviction that education *per se* is an inalienable human right.

The kinds of social problems which influence educational policy, or which are indirectly produced by it, are, however, regrettably real. The magnitude of the social change with which developing countries are contending ensures that their characteristic condition is one of political instability. The expansion of education contributes directly towards instability because it generates demands upon the political system which that system is unable to meet. On the other hand the adequate provision of education at all levels is a necessary

condition of political stability: only with trained manpower can public demands be satisfied by the government and its bureaucracy, and only a public educated to its responsibilities can participate with understanding in the task of nation-building.

No overall education policy in a developing country lacks political hazards, and wise decisions of policy do not always entail the least risk. A government may have to take chances on unpopular measures which are designed to achieve long term ends. On the other hand, some immediate public demands may have to be satisfied in order to avoid the loss of crucial popular support, even if conceding such demands invites political difficulties in the long run. A considered choice of policy, however, is impossible unless those who advise governments on the making of policy appreciate the dual political role of education in promoting both public order and unrest, and especially the potentially conflicting political consequences of any policy decision. With this understanding, the contribution they may make to education, and education in turn to the growth of stable and viable nation-states, will be enhanced.

A clinical study is reported of criteria which appear to underlie acceptance of authority in discussions with adolescents. The author compares these criteria with those suggested in political and sociological concepts of authority justification.

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Adolescents' Acceptance of Authority: A Methodological Study*

I. RATIONALE

This study begins with the assumption that in order for educators to improve curriculum and instruction, they must first gain greater insight into the ways in which students construe the world. In connection with a concern for a secondary social studies curriculum based on the analysis of public controversy, the author attempted to identify those values that serve as criteria for adolescents when they justify their acceptance of authorities to make decisions on controversial public questions. By way of introduction, let us consider the relationship between authority conflict, social controversy, and a particular type of social studies curriculum.

Conventional instruction on the relationship of the United States citizen to government emphasizes the importance of the legitimate delegation of power and the highly ordained value that governments derive their just powers from the consent of the governed. The delegation of certain powers to the Federal government, the reservation of other powers for the States, and the preservation of still others for private individuals forms a theme characteristic of formal citizenship education in America. Concern for the just

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exercise of power, eloquently stated in the Declaration of Independence, has since pervaded the fabric of American national values in a multitude of power relationships that serve as the bases for a variety of controversies, ranging from a child's rejection of parental control, to a professor's grading an examination, to a President's use of nuclear weapons. The very concept of individual freedom draws heavily on the notion of legitimate power. Young Americans learn not that they possess absolute freedom, but freedom in the qualified sense that any restrictions upon freedom must be justified. The demand to justify the use of power in both public and private matters operates as a potent value that at once ignites and directs dispute.

Later we shall note that the concept of legitimate or justified power occupies a focal point in the definition of "authority." For the moment, however, let us conceive of individuals or groups in positions that may require them to justify the power they wield, and let us label such agents "authorities." Examples of such authorities are courts, presidents, legislatures, teachers, and fathers. In some situations, two or more authorities may be viewed as competing for the right to act, competing for the right to make decisions that exert forms of interpersonal and social influence. Should the Supreme Court decide whether prayers are said in public schools? Should legislative bodies regulate the use of contraceptives? Should father or son decide whether the son smokes? Should adolescent or parent decide upon the dating patterns observed by the adolescent? Numerous questions like these bear the potential for heated disagreement over the jurisdictional boundaries of different authorities. The definition and delimitation of the sovereign areas of various authorities frequently functions as a germ of personal and social controversy.

A pluralistic society that supports a complex web of overlapping sovereignties may find that the resolution of visible social and interpersonal problems depends most fundamentally upon the prior resolution of less obvious dilemmas concerning the distribution of decision-making power. As Jouvenel (1957) observes, controversy throughout history has first required an answer to the primordial question, "Who should decide?" Only after reaching consensus on this question does the question, "What should the decision be?" seem operationally useful to explore. One theorist writes:

The conflicts between rival "authorities" are more excruciating to men than those between external "powers," whether flood or insect horde. For the first involves a conflict within the minds and persons of men, a clash of allegiances and loyalties (Benne, 1943, p. 100).

Another writer further illustrates this sort of conflict:

... where Antigone has to choose between the command of her king and the sacred custom of the kin, where Orestes has to choose between the respect due to his

mother and the obligation to avenge his father, where the persecuted religious sect has to choose between the law of temporal power and the ordinance of God, where the pacifist has to choose between the order to take up arms and the dictate of his conscience or his faith (MacIver, 1947, p. 79).

Clashes of allegiances and loyalties can be construed as value conflicts, within individuals, over the methods used to justify power. The clash may manifest itself in rivalry between individuals and/or associations who compete for the right to make decisions.

Oliver and Shaver (1962) construe public controversies in the United States as manifestations of latent dilemmas ingrained in a cluster of values that has been called the American Creed. When presented within abstract frames of reference, the Creed (for example as described by Myrdal, 1944) attracts virtually unanimous and highly affective consensus. Almost everyone will declare his devotion to general values such as: individual autonomy, community welfare, equal opportunity, liberty of property, national security, majority rule, and minority rights. However, general consensus may break down when, with regard to a question of concrete social policy, different values within the Creed lead to ambivalent or acutely contradictory policy positions. A restaurant owner, invoking the value of liberty of property, may refuse service to a Negro while the Negro, appealing to the value of equal opportunity, insists upon service.¹ If we construe social conflict this way, then we tend to analyze any specific controversial issue in terms of relevant value conflicts within the underlying Creed.

On the basis of this concept of social controversy, Oliver (1960) has proposed a "jurisprudential" model of citizenship education, and current efforts are underway to implement the model in the classroom. According to the rationale of this approach, the ideal citizen is one who, in the manner of an intelligent journalist, engages in dialogue with others to reach positions on controversial issues. The function of dialogue is to provide clarification, allow for the justification of one's own position, and to gain cognizance of positions and justifications different from one's own. To operate successfully in the dialogue, the citizen must use various forms of inquiry; various analytical and argumentative skills; he must have a fund of information to support claims and definitions; and he must use a repertoire of analogies to support or refute general value judgments. A curriculum focusing on this kind of training is being developed, based on "case studies" which proceed from examination of factual background of a problem, to the identification of sources of conflict, to justifications and consequences of alternative solu-

¹ For empirical support of the alleged discrepancy between degree of consensus on the abstract level versus the level of concrete policy, see Prothro and Grigg (1960).

tions. Intensive discussion and classroom debate leads the student to formulate his own position and to defend his view against those of teachers and classmates.

Oliver and his colleagues have developed a systematic observation scheme to describe the dialogue that emerges in discussions on controversial issues. Their work, in addition to that of Berlak (1963) and Ellis (1963) lends support to the reliability, validity, and utility of categorical content analysis. These studies, however, have not attempted to isolate and investigate the nature of the students' value commitments or attitudes. Instead, previous studies have been confined to the problem of classifying statements made in the contesting and confirming of policy choices. The content and evaluation procedures of the Oliver curriculum bear only indirectly on student attitudes toward authority and criteria used by students to justify authorities' exercise of power. The present study will pursue a direct concern for the concept of authority as a significant source of value conflict, a source heretofore unexamined. A curriculum directed toward the analysis of social controversy may benefit from attention to those attitudes that give rise to the conflicting statements on which controversy feeds. As proposed above, controversy thrives on questions related to the exercise of power by those "authorities" in which power is vested.

Authority defined

Political, sociological and psychological thinking on the nature of authority contains several dimensions beckoning for synthesis into a general definition. First there is a common conception of authority as *legitimate power* (e.g. see Weber, 1947; Lasswell and Kaplan, 1950; Jouvenel, 1957; Easton, 1958; Emerson, 1962). Power is usually defined as some form of behavioral control evident in different domination-submission relationships. However, to define authority as legitimate power is only to shift the definitional question to the concept of legitimacy. We must next inquire as to what constitutes legitimate power.

One way to distinguish legitimate power from other kinds of power is to rely on the notion of *psychological acceptance*, and to suggest that power is used legitimately when persons psychologically accept, acquiesce or advocate particular uses of power. Their acceptance should be voluntary, not based on physical coercion. Several writers (e.g. MacIver, 1937; Barnard, 1938; Benne, 1943; Easton, 1953; Weldon, 1953; Bierstedt, 1954; Jouvenel, 1957; Hendel, 1958; Winch, 1958) emphasize the psychological, subjective assent to power relationships as a defining characteristic which Lasswell and Kaplan (1950) call the "think-so" dimension of authority.

Carrying the thread of the definition further we may ask: What considerations lead to the psychological acceptance which legitimizes a power relationship? Friedrich (1958), expanding upon some of Weldon's (1953) observations, argues that the presence or absence of authority depends largely upon whether or not the agent who exercises power is able rationally to justify his use of power. It is hypothesized (Weldon, 1953) that voluntary acceptance of power diminishes when subjects believe their rulers incapable of offering reasons in defense of ruling behavior. Weber (1947), writing from a different perspective, also recognized rationality as a fundamental component of legitimate power. We would suggest that when an authority attempts to justify his use of power, he would be expected to defend rationally not merely the content or substance of his actions, but more importantly his right to act in the role or capacity he does. Let us summarize this third dimension of authority, which leads to psychological acceptance, as *rational justification of role and capacity*.

In light of these three considerations, authority may be defined operationally: *Agents possess authority when the power they exercise is accepted, because they are judged to contain the potentiality for reasoned justification of their roles (or capacities) in the exercise of such power.* We will assume further that the exercise of power occurs through the issuing of communications and that the issuing of communications is preceded by the making of decisions. The exercise of power may be seen as a direct consequence of the making of decisions, and therefore, the power to make decisions is implicit in the definition. According to the definition, we endow a person or agent with authority when we believe that his exercise of decision-making power can be rationally justified.

Conflicting criteria in the justification of power

Why do people disagree over the delegation of decision-making power? Suppose an argument develops over the question: "Who should decide whether the United States will make an effort to curb population growth?" Perhaps A maintains that a popular referendum should be taken, that only the people as a whole, by majority rule, should make this decision. B might argue that the people have already delegated this power to the executive who is more competent than the populace. C might argue that no public agency has a right to concern itself with this question, that it is strictly a private, individual matter, not to be considered by the public at large. Much of the disagreement over authority choices can be traced to fundamental disagreement over *criteria* used to justify the exercise of power. Perhaps A justifies the exercise of power by appealing mainly to the value of popular will; B

may be more concerned with the criterion of competence or expertise; C may value individual autonomy as a criterion, preferring to delegate authority for this decision to each individual. If A, B, and C, while discussing this issue, continue to reiterate their three separate criteria, then we could construe the criteria as conflicting value commitments which stimulated the dispute over the selection of an authority.

Given a definition of authority based on a concept of the justification of power, and given the hypothesis that conflict over the acceptance of authority can be seen as conflict over criteria used to justify power, we are then faced with an empirical question: What criteria are in fact valued by people when they attempt to establish authority relationships (i.e. when they make judgments about whether or not to accept the justification of one authority figure vs. another)? In asking such a question, we must acknowledge the possibility of many and varied answers; the variation in findings would probably be a function both of cultural differences and of research methodology.

Although this particular question has not been previously investigated in the manner proposed below, a number of writers, through their analytic consideration of the nature of authority, have suggested categories or criteria on which the acceptance of authority is based. Rather than evaluate the theoretical soundness of category schemes proposed by several authors, we shall, for the time-being, only recall some of the labels of their categories and then inquire whether such categories manifest themselves as valued criteria among adolescents who discuss authority problems.

Max Weber offered the first systematic classification of authority in terms of three types of "domination": *legal-rational*, *traditional*, and *charismatic*. His general typology has been adopted in whole or in part by several writers (Michels, 1930; Goldhammer and Shils, 1939; Benne, 1943; Wolpert, 1950; Spiro, 1958; French and Raven, 1959; Benn and Peters, 1961). Benn and Peters (1961) distinguish between criteria of authority when they refer to three grounds of "political obligation": *religious and metaphysical*; *traditionalist*; and *moral obligation*. Other investigators have focused upon more specific criteria. Michels (1930), Benne (1943), Spiro (1958) and Simon (1962) have all referred to *competence*. Simon (1962) notices a conflict between the value of competence and that of *majority rule*. Majority rule or popular will is also noted as an important criterion by writers such as Spiro (1958), Raven and French (1958), MacIver (1947), and Benn and Peters (1961). Because the categories underlined above arise from quite diverse frames of reference, they are presented here only as a cluster of ideas that might be used to discriminate between criteria valued by human beings when they attempt to elaborate the justifications upon which they base their acceptance of authority.

II. THE AUTHORITY JUSTIFICATION INTERVIEW (AJI)

The purpose of the present study is to begin to answer the following questions:

1. To what extent can subjects' discourse over authority choices be categorized into criteria hypothesized by political, sociological or psychological theorists?

2. What additional categories, not previously specified by theorists, can the researcher use to describe subjects' rationales for authority choices?

Assuming that a set of criteria can be detected, then:

3. Which criteria are more and less frequently used?

4. Do the criteria correlate with one another in any reasonable or predictable manner?

In an attempt to describe what might otherwise be considered random discourse, we shall deliberately construe subjects' responses in terms of particular categories (criteria). This in no way implies that subjects have any awareness of distinctions between categories, nor does it assume that the categories, if presented explicitly, would aid the subjects in construing authority conflict. The stipulated criteria represent the researcher's effort to clarify for himself subjects' responses. Answers to these questions could have implications for more general issues; for example, the relationship between analytic social science models and empirical observations of verbal behavior; the nature of adolescent attitudes toward authority; or the content of social studies curriculum. It is important to conceive of this study as essentially a methodological effort, a demonstration of one way to look at students' verbal behavior. We must, therefore, not expect the results to provide conclusive enlightenment on any of the general issues. We must also stipulate that it would be presumptuous for this study to relate its findings to theories in the psychology of adolescence or to considerations regarding the dynamics and formation of adolescent attitudes.

PROCEDURE

Sample

The final sample consisted of 72 twelfth grade boys from two public high schools in the Boston metropolitan area. The schools, serving two middle-class residential communities, place emphasis on college preparatory curriculum (in both schools a majority of the graduates continue in some form of higher education). Subjects in the sample covered a wide range of academic ability and motivation. They volunteered to participate in a private interview dealing with their opinions on public affairs.

The interview

A tape-recording was made of each subject's private interview. Subjects were instructed to choose decision-making authorities to determine policy on several important public issues. The subject was asked to justify each choice against alternative authorities. It was emphasized that there were no right or wrong answers; but that we were interested in opinions, and the *reasons* given for choosing one authority over others. The interviewer read aloud to the subject eight items. For each item the subject selected an initial authority (decision-maker), then attempted to justify his choice in a dialogue with the interviewer who challenged the subject's statements in a gently Socratic fashion. That is, after the subject had completed his initial, open-ended response to the item, the interviewer proceeded with further questioning designed to clarify the problem situation, guide the subject's attention toward the rationale behind his authority choice; and lead the subject to defend his choice and rationale against other possible positions. The interviewer terminated the discussion of an item when the subject had nothing further to say, or when the interviewer felt that additional discussion would not further clarify the subject's commitments to various criteria. Two sample items are presented below:

1. The United States faces the problem of whether to conduct tests of atomic weapons in the atmosphere. Who should decide how much atomic testing is done by the United States?

Congress
President of the U.S.
Experts on the Atomic Energy Commission
United Nations
All citizens in the U.S.
Other?

Why should make this decision?

7. Whether White and Negro children attend the same public school has been a problem in the United States. Who should decide whether White and Negro children go to the same school?

Parents in the school district
Congress
Supreme Court
Principal
Each student
Other?

Why should make this decision?

In the remaining six items, subjects were asked to choose decision-makers for the following issues: prayer reading in the public schools; racial segregation in places of public accommodation; censorship; allocation of foreign aid; treatment of communists; and the declaration of war. The interviews lasted about 25 minutes.

Scoring the interview

Category scheme. A category scheme was developed to identify different criteria that subjects rely upon in their verbal justifications of authority choices. The theoretical literature on bases of authority provided analytic support for the definition of some criteria, e.g. competence, legality, group will, tradition, religion. In addition, the writer made use of his own presuppositions regarding the salience of other criteria in the American value system, e.g. impartiality, efficiency, autonomy. These hypothetical categories were defined and their usefulness tested in a pilot study consisting of 80 written questionnaires and 10 tape-recorded interviews. The pilot findings indicated that two additional categories were needed (interaction, favored policy) and that the originally hypothesized categories needed definitional refinement. The final category scheme grew out of fragments from social science theory, and exploratory empirical research. By listening to the tape-recorded interviews, judges scored the frequencies of different criteria in terms of ten categories, defined as follows:

Definitions of AJI Categories

Category Name:

Identified by Reference to

Competence

knowledge; intelligence; experience; skill.

examples: "Scientists know the most about nuclear testing."
"Parents know what's best for their kids." "The people aren't smart enough and haven't had experience in foreign affairs." "Children aren't mature enough to select their own reading."

Legality

the current delegation of duties and powers; the sanctity of rules, laws, and legal documents; jurisdictional claims.

examples: "The Constitution gives the Supreme Court the right to judge our laws." "This is a national problem, not one for each town to decide." "It's the President's job to declare war." "The principal, not the students, runs the school." He has no right to make that decision."

Impartiality

the ability of a decision-maker to be unbiased; immunity from favoritism and political pressures; weighing of *all* sides with equal concern for each.

Definitions of AJI Categories (continued)

Category Name:

Identified by Reference to

Impartiality (cont.) examples: "Congress is aware of all sides of the picture, and will make the fairest choice." "The President would be too prejudiced." "Politicians would only vote for what's good for themselves."

Group Will the articulation and representation of popular will; the interests of the majority of a group; representation of national (or group) interest; majority rule.
examples: "Congress speaks for all the people." "Experts are out of touch with the feelings of the common man." "The majority knows what's best for the nation." "The U. S. should decide because it represents the whole world."

Efficiency the thrifty use of time, money, resources, and human energy; the effective implementation and enforcement of policy; the avoidance of trouble, confusion, and conflict.

examples: "There would be utter chaos if this issue were taken to the people." "The President could act the fastest." "It would be too unorganized if every town had a different policy." "The country would fall apart if each person decided on his own." "The President would see that integration was enforced."

Tradition historical precedent; the value of long-established principles.

examples: "The President has always made these decisions." "No one has ever disputed the fact that all men are created equal." "One of the ideas that the country was founded upon is free speech."

Religion valued support of religious documents, organizations or specifically religious concepts.

examples: "The *Bible* teaches that integration is wrong." "The religions of people should be respected." "A person should follow the teachings of his church."

Autonomy the right of individuals or groups to be free from coercion and control; the need to participate in the making of decisions that affect oneself.

Note: autonomy can be divided into *individual* and *collective* autonomy.

Individual: privacy and personal freedom of each person to affect his own destiny, without coercion from any authority.

examples: "Each person should read whatever he wants."

Definitions of AJI Categories

(continued)

Autonomy (cont.)

"Congress shouldn't tell a man how to run his business."

Collective: freedom of collective units (families, schools, nations, etc.) from coercion from external authority.

examples: "Students should decide because they are the ones saying the prayers." "The people should have some say about their own destruction." "Parents should run their families the way they want."

Favored Policy

preferred specific policy outcomes, rather than the rationale behind an authority choice; pleas for the implementation of specific social policy.

examples: "The schools should be integrated." "We should stop giving so much aid to foreign countries." "The people should not decide because they would probably surrender."

Interaction

mutual participation and consultation of several authorities, based on the claim that more heads are better than one; the claim that a decision made by a group is better than a decision made by an individual, or that certain kinds of decisions are too crucial to leave to single individuals.

examples: "This decision is too important to be made by only one person." "The more opinions the better."

Particular authority choices themselves (e.g. Congress or Supreme Court) were not considered indicative of any particular category. Judges scored not the specific choices, but only reasons given in support of the choices. Whenever the judge perceived the subject making a statement that fit into one of the ten categories, the judge placed a tally mark on the subject's score sheet in the corresponding category.² For each subject, the frequency counts were totaled for each category over the eight interview items. Thus each subject was assigned ten scores, representing the frequency with which he used each of the ten criteria during his interview.

After training the judge to identify the various criteria as they emerged in discourse, several reliability checks were made during the final scoring process. Final reliability estimates of two judges for a sample of 30 of the 72 subjects appear in Table 1.

² Subjects' responses were not dissected into grammatical, word-frequency, or time-interval units. Instead, we considered as a "unit" any reference by the subject to one of the ten categories; such references could have taken the form of complex sentences or a few words. From this stipulation, it followed that no "unit" or reference could be tallied into more than one category.

TABLE 1
*Final Reliability Estimates of AJI Category Scores, Based on Total Raw
 Frequency Counts of Two Raters.*
 (N = 30)

<i>Category</i>	<i>Pearsonian r*</i>
competence	.94
legality	.96
impartiality	.95
group will	.93
efficiency	.88
tradition	.83
religion	.80
autonomy	.92
favorable policy	.86
interaction	.94

*for all coefficients, $p < .01$

The category scheme evidently involved relatively simple kinds of discriminations, allowing the dialogues to be reliably categorized.

RESULTS

Generally subjects appeared highly motivated by the task, interested in discussing the issues, and enthusiastic about presenting their opinions. Yet it seemed for many a mentally painful exercise; painful because the process involved the challenging of values and assumptions that had not previously been called into question. Few subjects seemed to have devoted much prior thought to the selection and justification of authorities, probably because this has not been emphasized in either their formal or informal education.

Sample data

Before proceeding to quantitative analysis of the data, it may be instructive to consider examples of subject-interviewer dialogue. For the following three items we can compare the responses of two subjects, X and Y.

Item 1—Atomic Testing

The United States faces the problem of whether to conduct tests of atomic weapons in the atmosphere. Who should decide how much atomic testing is done by the United States? Congress, the President, experts on the Atomic Energy Commission, the United Nations, all citizens in the United States, or maybe you can think of some other alternative.

X: Well, it'd be either the experts in the Atomic Energy Commission or the United Nations because. . . . Then again the President, I don't think one man should make up their mind, and all the citizens, they probably don't know what's go-

- ing on anyways. Let's see, well the United Nations would have to get together with the other countries because I don't think we should do less than the other countries because then we'll just fall behind. But either one I think would be all right.
- I: Now when you say you don't think it should be up to one man, what do you mean by that?
- X: Well, I don't think one man should make all the decisions for all the people in the United States, even though he is the President.
- I: You think you'll get a better decision if you have a group making it?
- X: Yeah, uh-huh.
- I: Now why would you even have the experts in there? What is it about the experts that's important?
- X: They know what's dangerous and what isn't, but the citizens, they probably don't know much about the subject.
- I: Some people might say that Congress should make the decision because then we would have a vote on the matter and it might represent the people of the country if Congress made the decision. What do you think about that?
- X: Congress could, I guess, but I'd rather have the United Nations get together with the other countries. If Congress makes it, it's just for the United States, and if you can make an agreement with all the other countries it'd be even better. Congress, that isn't even like the people; the people elect them, but they vote themselves. It's just their personal view, too.
- Y: Well, I think it ought to be two authorities. The people who know more about it, I mean like experts on the Atomic Energy Commission, well they know what they're doing and they should have a say about what's going on. And the people of the U.S., too, because some of the people are scared, actually scared of this radioactivity, and they should be paid attention to more.
- I: Because it's their lives?
- Y: Yeah, it's their life actually and just with the President and Congress there they . . . the President he doesn't know everything. But this is just their job, the agents of the Atomic Energy Commission. If they want to continue these tests, well they should notify the citizens and if the citizens say OK, well it's all right.
- I: You think the final word should be left up to the citizen?
- Y: Yeah.
- I: And what would be your reason for that?

Y: Well, in a way the United States is for the people and if you go against that, say if these people just went out and start blowing up bombs in the air and stuff like that . . . they should notify the people that if they want this, they should take a vote on it or something like that.

I: Because it's the people's country?

Y: It's the people's country, and it's where the people are living in this country.

Item 2—Racial Segregation in Places of Business

There are some hotels, restaurants and stores in the United States where Negroes are not served. Who should decide whether Negroes are served in such places? Congress, the owner of each business, Supreme Court, town government where the business is located, church, or maybe you can think of some other alternative.

X: The Supreme Court, I think, or Congress. Because down South the owner of the business, he wouldn't want them in anyway so they wouldn't have a chance there. The town government, if it's down South they wouldn't have any chance. The Church would want them in, I think. But the Supreme Court I think is good.

I: Why?

X: Well, they're all judges, and they don't hold any prejudice against anybody or anything. Congress would be good too.

I: They both might be good. Would you tend to lean towards one or the other? You mentioned the fact that judges wouldn't have prejudice. Would this be true of Congress, too, do you think?

X: Well no, because some of the Congressmen are from the South. Even though judges might be from the South, you can't hold that against them.

I: Do you think that the Supreme Court has any legal right to do this?

X: Well, all men were created equal; they decide on that.

I: What about the owner of a business who might argue this way? He might say, "Look, it's my property. I paid for this store; it's my business. It's my right as a free individual to run it the way I want, and I don't want Congress or the Supreme Court telling me what to do." What do you think about this kind of argument?

X: Still everybody is free and an individual, any individual, can come into the store. It's his right just as well as it's the owner's right not to want him; it's his right to come in if he wants.

Y: In my opinion it should be the owner of each business because it's his business, but if it's going to cause trouble and segregation and all that—which it

is—For myself, I don't like to be forced into something. I don't know if these people, of these businesses, if they believe strongly about this. I believe they shouldn't be forced into it.

I: If you were the owner of a restaurant, you wouldn't like to be forced into it?

Y: I have no prejudiced views against Negroes. I have a lot of Negro friends. It's just that if this is the way the people believe, let them believe it that way. If they really want to fight about it, let them go.

I: You don't like the idea of forcing people to believe anything?

Y: Yeah.

I: Or making laws to make them believe anything?

Y: Yeah. But if it's really going to hurt, say, the majority of people, they should be forced to do it.

I: Now who is going to do the forcing if it's decided that it might hurt the majority? Who should make the decisions on this matter if they're not going to leave it up to the businessman?

Y: The Congress of the United States.

I: And why the Congress?

Y: Well they have a power; we give them the power. The majority of the United States gives the Congress the power to pass laws and stuff. I mean a town government where the business is located, they might side with the businessman you know, a little pay out or something like that. But Congress, it's left up to them; they can really enforce the law if they really have to go through with it.

Item 3—Communists

There is considerable argument about the proper activities of Communists in the United States. Who should decide how Communists will behave in the United States? Congress, the Supreme Court, each local community, let each Communist decide his own behavior, experts on Communist activities like FBI men, or maybe you can think of some other alternative.

X: The Supreme Court.

I: Why?

X: Well, that all has to do with the law—what they can do and what they can't do. So the Supreme Court, I think they'd be the best. That's their business.

I: To handle things dealing with legal matters, is that it?

X: Yeah.

I: I see. What about the argument that it's a free country and each Communist

should regulate his own behavior just like every other person regulates his own behavior? There shouldn't be any special rules for Communists.

X: Well, then they'd try to take over the country. That's what they're trying to do. They'd just get that much closer in doing it and eventually they'd do it, if they could do anything they want.

I: How about leaving it up to each local community to decide how serious the situation is in each place?

X: Get a few communities with a few Communists in it and they start taking over, and they take over the whole community, and then a neighboring community, and then they get the whole county, and then the whole state. It'd just get worse and worse.

I: How about Congress, should they have anything to say about this or should we leave it completely in the hands of the Court?

X: I guess Congress could have a little say. It's either Congress or the Supreme Court; I'd say it's the Supreme Court.

I: Why should Congress have a little say?

X: I didn't mean little. I meant they could.

I: They could. Why?

X: Well, they should know what's best for the country, again.

Y: Well, the Supreme Court and the FBI because the FBI agents, they can take care of the Communists. I mean I have read about it; they spy on them. I mean people who believe in Communism, they're out to sabotage, so they got to be kept an eye on, and Communism has to be registered. I think that's a . . . I don't know if it's a Supreme Court law or a Congress law. I'm not sure.

I: It's a Congress-made law.

Y: They have to register as a Communist.

I: Now why do you want to leave this up to the Supreme Court? Why don't you leave the whole thing up to the FBI and let the FBI make sure they keep things under control? Why do you want to bring the Supreme Court or Congress into it?

Y: Well, the Supreme Court, I don't know, it has a name for itself you know. It has a name and a kind of power—supreme—you know, and if they get into this, you know, there's going to be something done. I mean the FBI has a name for itself, too, but if the Supreme Court's in it, some people will say well, if the Supreme Court's in it, we might as well help them get it done.

I: So they'll believe and they'll follow what the Supreme Court says? I see. You think the Supreme Court is more effective and gets things done better than Congress does?

- Y: Well, yeah, because the Supreme Court is for controlling the laws, enforcing the laws. Congress is making them.
- I: So what you really need here is enforcement when you're dealing with Communists?
- Y: I mean what's the sense of having a law if no one's going to enforce it?
- I: OK. Now what about the person who says well, each community sometimes has different problems and you ought to leave it up to each town to figure out how it wants to treat its Communists instead of leaving it up to one policy for the whole country? What would you say to that?
- Y: Tough. Because I mean they've got the whole country to worry about, not one little community. These Communists might hop to a next station and blow it up, and hop back to the community and be safe.

For these three items combined, subject X emphasized competence, impartiality, and interaction more often than subject Y. Subject Y emphasized efficiency and autonomy considerably more frequently than subject X. Differences between the subjects on other criteria were negligible.

Observed criteria

In analyzing the interview data, we were able to construct a reliable set of categories which to some extent resemble criteria mentioned in the theoretical literature. By examining our list of criteria (above pp. 311-313) and our definitions of each, we can begin to answer the first two questions posed above (p. 309). The criteria of competence, legality, group will, tradition and religion can be observed, to greater and lesser extent, in the subjects' justification of decision-making power, and all of these criteria have been anticipated in one way or another in the theoretical writings. We must be careful to note, however, that our definitions of these categories for purposes of scoring the conversations differ from definitions developed by earlier authors. In spite of possible definitional variation, it is encouraging to find that several of the hypothesized criteria do serve as reliable categories by which to classify verbal behavior.

Categories of the theorists were insufficient in the sense that several additional criteria were detected: impartiality, efficiency, autonomy, favored policy, and interaction. This finding represents the fruits of an effort to listen as open-mindedly as possible to the student's rationale, to search for current concerns and then to name them as separate categories or criteria. The additional criteria may be primitively formulated, compared to the more familiar criteria which have benefited from systematic thought. However, this type of listening and categorizing seems to be a necessary first step in the

formulation of more comprehensive descriptions and explanations of authority acceptance.

Given frequency tallies on ten criteria for each subject, the interviews were analyzed to answer two remaining questions:

3. Which criteria are more and less frequently used in the adolescents' attempts at authority justification?

4. Do the criteria correlate with one another in any reasonable or predictable manner?

Criteria used with differing frequencies. Table 2 indicates, in rank order, the more and less frequently used criteria among all subjects.

TABLE 2
Means and Standard Deviations of AJI Scores
($N = 72$)

Category	Raw		Percentage*	
	Mean	St. Dev.	Mean	St. Dev.
competence	8.72	3.90	18.90	7.36
legality	8.14	4.25	17.90	9.59
efficiency	6.60	3.56	14.60	7.61
autonomy	6.17	3.66	13.88	8.72
group will	4.58	3.02	10.18	6.46
impartiality	4.46	3.44	9.85	7.81
favorable policy	3.74	2.48	8.26	5.48
tradition	1.89	1.85	3.96	3.59
interaction	.89	1.06	1.93	2.18
religion	.31	.78	.69	1.77

* To compensate for differences in total responses between reticent and talkative subjects, percentage scores were computed for each subject: his raw frequency for a category divided by his total number of scored responses.

Note the prominence of competence, legality, efficiency and autonomy; the relative scarcity of tradition, interaction and religion.³ The priority given to competence echoes Friedenberg's (1959) observation that competence ranks most highly in the hierarchy of adolescent values. The lack of responses valuing tradition or religion lends credence to familiar claims regarding the adolescent's irreverence for and alienation from the past. This data permits no conclusive inferences, but observations on the general differences in means may help to establish facets of validity in the instrument and may suggest some of the valued elements in the process of authority justification.

Correlations among the Criteria. Because the criteria of religion and inter-

³ Given the means and standard deviations, a series of t-tests could be computed to test which frequencies differ "significantly" from each other, but such computation at this stage in the development of the instrument seems premature.

action revealed extremely abnormal distributions and a consistent lack of linear relationships with the other variables, these two criteria were deleted from further statistical analysis. The correlations among the eight retained criteria are given in Table 3. Of the 28 coefficients, 10 are significant beyond

TABLE 3
Pearsonian Correlation Matrix of Eight AJI Variables
(Transformed Scores, $N = 72$)*

Variable	1	2	3	4	5	6	7	8
1. competence	1.00	-.15	-.10	-.41	-.10	-.09	-.07	.08
2. legality		1.00	-.27	.08	-.17	.04	-.43	-.22
3. impartiality			1.00	-.20	-.03	-.17	-.14	-.20
4. group will				1.00	-.10	-.10	-.21	-.22
5. efficiency					1.00	-.28	-.13	-.22
6. tradition						1.00	-.12	.13
7. autonomy							1.00	.07
8. favored policy								1.00

* For 70 degrees of freedom, $p < .10$ when $r \geq .20$; $p < .05$ when $r \geq .23$. (To render the data more appropriate for multivariate analysis, the scores were transformed by the inverse sine transformation, Mosteller and Bush, 1954).

the .10 level; 4 are significant beyond the .05 level. The absence of more impressive correlations suggests that the categories may not readily be reduced to fewer dimensions, factors or common traits. However, if we notice the most significant coefficients, three interesting bipolar relationships come into focus: competence vs. group will; legality vs. autonomy; and efficiency vs. tradition. Noting the significant negative coefficients for these pairs, let us consider them separately.

The person who values competence in the delegation of power is apparently opposed to distributing power to the masses who, for their lack of knowledge, expertise and experience, are considered unqualified to make public decisions. Political thinkers and historical movements through the ages have manifested a basic conflict illustrated by this negative relationship between competence and group will: should public decisions be entrusted to a skilled professional elite, or should the will of the group, however unenlightened, prevail? The second polarity, legality vs. autonomy, also makes sense historically and psychologically—an autonomous individual who values the chance to make his own decisions might abhor legal prescriptions and procedures that threaten his own flexibility and powers of self-determination. This negative correlation between legality and autonomy might be construed as a flexibility-rigidity, free will-authoritarian, or more generally a liberty vs. order dimension. Political process is customarily evaluated along the yardstick of independence and self-determination vs. obedience to pre-established

legal norms and procedures. The third negative relationship, efficiency vs. tradition, may be indicative of a dimension of judgment that asks whether a government is trapped by the ways of the past or is effectively moving ahead. A progressivist, "getting-on-with-the-job" vs. a conservative, following the ways of previous generations may serve as a distinct parameter along which power relationships are justified.

In addition to these relationships, Table 3 shows impartiality negatively correlated with legality and favored policy not clearly related to any of the other categories. These relationships are not as easily interpreted as the above three, but even the above polarities might be viewed with suspicion. They were noticed and discussed merely as suggestions or hypotheses that the data *created*, but certainly not as conclusions that had been verified. Factor analysis of the matrix indicated that the three dimensions noted above account for only a small proportion of the total variance. Most of the variation among the categories is accounted for by the *unique* contribution of each variable rather by the variables' linear relationships to each other.⁴

Qualifications. Inferences from these findings that may relate to the theory of authority, the nature of adolescent commitment, or to curriculum development should be qualified by at least three general limitations: (A) The relationship between specific interview questions and observed valued criteria has not been investigated. Any given subject did seem to produce different profiles for different items, but no analysis was undertaken to determine whether given items, across subjects, elicited consistent criteria. To the extent that the items fail to represent the gamut of issues related to power justification, so too do the responses to those items represent only a limited index of general attitudes toward authority. It remains to be seen, for example, whether commitment to criteria of authority in public matters approximates the pattern of commitment related to more personal or private concerns. Power relationships relevant to more intimate kinds of value conflicts may depend for their justification on an entirely new set of criteria. (B) To the extent that the experimenter's interviewing style reflects biases that may call for some criteria more often than others, the data may reveal more about the interviewer than the subjects. This study did not analyze interviewer style, nor did it attempt to identify ways in which specific interviewer behavior might have elicited specific kinds of subject responses. (C) Finally, attempts to generalize the findings to a wider adolescent population must take into account those characteristics that may differentiate the sample in this study from other adolescent groups.

⁴The factor analyses used a principal components solution (Harman, 1960; Cooley and Lohnes, 1962) and an oblique rotation with Carroll's biquartimin criterion.

CONCLUSION

Having conceived of authority as the acceptance of the justification of power relationships, we have found some evidence that, for a certain population of adolescents, such acceptance derives from commitments to distinguishable criteria. We conclude that subjects' verbal acceptance reveals criteria which have been formerly hypothesized by political and sociological theorists, but which have not been investigated in a "clinical" sense. This clinical application indicated that additional criteria might be needed to describe rationales which people use as vehicles to accept decision-making power (in the area of public controversy).

The differential frequency with which the criteria were invoked indicated more and less popular criteria within this adolescent sample. Correlations between the frequencies of the criteria suggested that some of the criteria are meaningfully related to each other in terms of familiar political and psychological observations.

The study was undertaken as an exploratory effort, and the findings might be used to stimulate additional investigation in many directions. In connection with the teaching of public controversy, teachers could use (and refine) the category scheme as a diagnostic tool for describing student commitment bearing on authority conflict. It would not be necessary to interview and score each student separately. Discussion of an entire class on the legitimacy of decision-making authority can be tape-recorded, then scored to obtain a general profile of the class as a whole. Besides using the interview protocol as a diagnostic device to aid the teacher in learning more about his students, the students themselves might use the scheme as an introspective activity. By listening to their own tape-recorded discussion, they could learn to recognize and distinguish between their differing commitments to various criteria. Recognizing the values at the heart of a conflict presumably will aid in the conduct of rational discourse about the conflict. A category system such as this will help provide labels for different commitments likely to stimulate conflict over authority choice.

Findings reported in the study obviously cannot confirm the utility of these recommendations, because the findings relate mainly to methodological issues inherent in a "first step." The recommendations are made, and the study was undertaken, on the assumption that more effective teaching may result from systematic listening and classification of what students have to say.

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The authors satirize the misplaced ingenuity employed by education in the defense of its own fundamental deficiencies.

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The Year the Schools Began Teaching the Telephone Directory

No one quite knew what had been the motivating factor. It seemed unlikely that the Council for Basic Education was behind it. Sputnik itself seemed a long way off. Some harsh critics, seeking a scapegoat, suspected the Telephone Company, but upon closer examination it was clear that they might have had as much to lose as they would to gain.

No, it was the superintendent's decision, and no apparent pressure group seemed to have motivated it. The memorandum went out on March 18th. It was simple and to the point.

Beginning with the Fall term, all 7th grade classes will be held responsible for learning the contents of our local telephone directory. Each teacher, working in cooperation with his or her immediate supervisor, will evolve the methods and procedures necessary to effect an efficient and appropriate achievement of the above-stated goal.

You can imagine the buzzing which went on in the men's faculty room. Some said that the memo was a first step towards a merit pay plan. Others were convinced that it had something to do with Admiral Rickover. An intellectual blamed it on that "Bruner guy." In the women teachers' room there was a more sedate but none the less bitter inquiry. "Just what is the

old boy up to now?" Do you think there will be a system-wide test?" "I wonder if any company has brought out review books yet?"

Labor Day with its sad, fond farewell to the summer came and went. School was off and roaring. Most of the teachers weren't settled enough to give the students the telephone directories until the second day of class, but out they came and then it began, usually with some motivation such as this:

"Boys and girls. We are going to have an exciting new unit this term. As a way of studying our city, we're going through this amazing collection of information which tells us about the melting pot our city has been."

One teacher said, "There will be an examination on this material in February, so you'd better learn it."

Another approached it with, "You wouldn't want to hurt my feelings by not memorizing these few names and numbers, would you, children?"

Students dutifully received their directories, wrote their names on the labels, and tactfully checked off the condition, "new." Feeling deeply his professional responsibilities, almost every teacher reminded his class that the books would be rechecked in February to see that no pages had been written upon or in any other way disfigured.

Miss Clark, a not atypical telephone directory teacher, was heard to say: "Now boys and girls, let us look over our new textbooks. You will notice that it has a logical organization. It is arranged by the alphabet, as it were, and that's why they don't have a table of contents or an index. Although there are no illustrations in the part of the book we will be concerned with, you can always turn to the yellow pages for a picture or two. I've always enjoyed the listings for exterminators and moving vans. How about you?"

The students were quickly caught up in the enthusiasm the teachers projected and they pounced fiercely upon the new textbooks. Many looked at their teachers with new respect and admiration, for indeed the textbooks *were* arranged by the alphabet. Ah, to have education and wisdom. It was then that Miss Clark wrote on the board, in clear, Palmer-method letters: "Tonight's assignment. Read and memorize the A's."

Most of the students dragged home the telephone directories and after a short scrap with mothers about the t.v.-watching policy of the new term, they sat down to the evening's work. Read and memorize the A's. It was hard going, but this is not an easy world. Teachers, parents and students agreed that school needed to be more rigorous. Nothing comes easily, the students had been told, year after year. So they read and they memorized.

Morning came and the 7th graders filed into their respective classes. "Good morning, boys and girls," greeted our typical telephone directory teacher. "Did you do your homework last night?" (Not wishing to dampen the ardor of learning, she decided against a surprise quiz on this, the first morning of

the unit. After all, an understanding of early adolescent behavior had been part of her background.)

"All right, students, let's begin. What is Gregory Arnold's phone number?"

A hush fell over the room, but almost instantly, three hands shot up.

"Eloise," the teacher said.

Eloise answered, her voice more questioning than answering, "Tr 8-9754."

"Very good, Eloise," the teacher said, "but, please, class, let's use the full name of the exchange. Digital dialing is not completely with us yet. Let's say, *Triumph* 8-9754. Next, class, tell us who lives at 174 N. Maple Street?"

Almost all of the hands went up. The teacher smiled benevolently. She had asked them an easy one, thrown out to give everyone a little feeling of success. It was the address of Mr. Appleby, the principal, and almost everyone knew about the old mansion he lived in. The teacher, always striving to provide for individual differences, called on the slowest learner in the class and he gave the right answer. Everyone felt warm and good.

"Now boys and girls, we'll take up a little more difficult topic. Whose number is Wentworth 4-7312?" Panic spread through the class. No one seemed to know. Could she have slipped in a number from the B's? Finally, after the silence seemed unbearable, one hand, timidly, climbed towards the ceiling.

"Yes, Henry?" the teacher asked.

"I'm not sure, Miss Clark, but is it Frank Abelard?"

"Now, Henry, I'm asking the questions. Do you know or don't you? Do you wish us to count 'Frank Abelard' as your answer?"

Was she supporting now, giving a hint that Frank Abelard was, indeed, the correct answer? Henry wasn't sure. It was difficult to figure Miss Clark sometimes.

"Well," he said, "I guess I'm not sure."

"But, Henry," she said, "You were right! It was Frank Abelard. You must have more confidence in yourself. Confidence is the substance of maturity. Right? Now, the next question. What is the name of the home appliance repair company on Front Street?" One hand went up instantly and the teacher was taken a bit aback. "Yes, Gloria, do you know the answer?"

"I certainly do. That's my father, Miss Clark."

"That's all very nice, Gloria, but we're here to find out if you did the assignment or not, so I think I had better give you another question. What is the phone number of the American Bar Association?"

A wave of laughter quickly spread through the group. Most of them knew, but Miss Clark didn't, that very often Gloria's father was not available to fix a reluctant washing machine because he just happened to be in a bar, albeit usually not the American one. Gloria didn't answer, she just blushed, and Miss Clark said, "Now, Gloria, you'll just have to do your work more con-

scientiously. This is a difficult unit and I want our class to do well on the finals. You're just going to have to work harder, Gloria, and that goes for the rest of you as well."

The hand of a boy named Edward went up from the back row. "Miss Clark, can I ask you a question?"

"Now, now, Edward," Miss Clark said, "Time is running out and we have all of those A's to cover this period. Please save your question. Later, perhaps, in February, we can take it up. Back to our work, class. Which big industrial company in our town has two phone numbers?"

And so it went. Through the B's and through the C's. The students (many of them) studied and the teachers (all of them) cross-examined. After the D's there was increasing anxiety in the air as teachers began to have quizzes. But everyone seemed to know that it was the big marking-period test which was to count the most. That was the time for nerves! Miss Clark was one teacher who did place equal emphasis upon quizzes and tests, and so, of course, anxiety in her room was at a more constant level.

Many questions were raised in the school and in the community about this new seventh-grade curriculum. It wasn't long, however, before a united front of teachers, principals and the superintendent, worked out, in more or less trial-and-error fashion, a set of answers that became quite standard. Soon no one bothered to ask the questions any longer, for the answers had become predictable. For the historically-minded, here is a sample of the more pesky questions.

- Q. Why learn the telephone book?
- A. It develops good study habits which will be necessary in college and it trains the student to concentrate and apply himself, qualities which are useful in adult life. Among other things, disciplined adults are what we want.
- Q. Won't they just forget the information after the tests?
- A. The less bright student will most likely forget a lot. However, we intend to have regular reviews in later grades and consequently the retention curve will hold fairly satisfactorily.
- Q. Why work so hard learning the telephone book when the directories are so handy when you actually need one?
- A. After all, this could be said about any subject we teach. If we want our people to look up information when they need it, why teach anything? Furthermore, life is hard and the sooner our students learn this the better off they will be.

There were, of course, some students who did not concentrate enough to learn the phone book. It is not easy to run a school. There are slow learners in every community. These students were identified and plans were made to place them in special remedial classes the following term, classes which

would work mainly on the yellow pages. The color, illustrations, greater interest value, and reduced amount of material were expected to result in success for all but the fundamentally bad or lazy. Some children, it was readily acknowledged, just wouldn't learn no matter what a school did.

Back in the classrooms it was letter after letter until the word was out that there would be a system-wide mid-term examination on A through M. Oh, the cram sessions which were organized by eager mothers, the withheld allowances which were used as bludgeons, the diligent studying which went on! Never before did so many telephone numbers, addresses and names get committed to so many memories.

Some boy students in the group spent their hours making small strips of answers which they taped to their shins and which were read later by slowly lifting their trouser legs. Some girls wrote their answers upon flat throat lozenges. A few did nothing; they were non-motivated and didn't seem to care to become other than non-motivated. The only numbers they could get even a little excited about were the ones they phoned regularly themselves.

On the day of the test there were the usual amount of absences due to nervous stomachs. The teachers grudgingly set aside time for make-up exams, vowing to make them harder than the regular exams, "otherwise, everyone will want to wait for the make-up test." So the test was given, the papers marked, the grades carefully recorded in the appropriate grade books, and the teaching routine resumed.

But Miss Clark became increasingly uneasy. She was getting weary of asking, "Who lives at so-and-so? Whose number is such-and-such?" Dull days. Slowly, the rich memories of her undergraduate days in education courses came back. She sifted through the jargon and searched for ideas . . .

The next Monday it was a new Miss Clark. The change rippled through the rows with electrifying results. Miss Clark had gone "progressive." For one thing, she organized a field trip. She and her class went off on a long walk to look upon some of the houses in the "N's." It was difficult to plan, but Miss Clark felt that at least she was doing something worthwhile. Then she came up with the idea of inviting a guest speaker to come to class to talk about the P's. She obtained a film strip on the R's, but it turned out to be about the "Three R's" and she couldn't use it. She attempted to organize committee work on the T's but the committee could find nothing to do, so she had to scrap that idea. Miss Clark programmed the U's and this helped some. They had a bulletin board display on the V's—"Victory Lunch" and "Veteran's Taxi Cab Service." She did role playing on the W's, had a discussion-debate on the X's, and then, with that handsome Mr. Brown in room 107, she did team teaching on the Y's.

By the time the Z's were reached, she was worrying about transfer of train-

ing. Would they really know how to use their knowledge? And, then, she had had no "correlated motor behavior training," as they sometimes called it in college. So Miss Clark's class spent two whole days, courtesy of the public relations department of the phone company, practicing dialing the numbers that they had learned (on eighteen telephones of various colors and shapes). It was noisy, and difficult to supervise, even though the students were carefully grouped, sociometrically, but Miss Clark was willing to risk a little to be a good teacher.

Finally, this too had to end. The final exam was a mere six weeks away. So, in Miss Clark's class, as well as in all the others, thirty days were spent in review for the "Big Test."

Review was no fun for anyone. The first week of June came with the sweetness of summer air. The girls in their barearmed summer dresses flitted in and out of the classrooms while the boys seemed slower than ever. Finally, the test was taken, the papers marked and the term was over. A sense of heavy relief settled upon Miss Clark and all the others. The teachers gathered in the telephone directories, properly disciplined those who had written in their books, and stacked the directories in piles of eager readiness. September was not far away.

Miss Clark felt strangely tired. It wasn't that she had really worked harder this term. The feeling of being drained came from something else. Exactly what she wasn't sure and as she walked to her mailbox she was pondering this problem. There was a blue slip of paper in her mailbox among the more routine notices. It was a memo from the superintendent.

The success of the telephone directory project initiated by this office has earned the well-deserved respect and admiration of the entire community. The rigorous efforts you and your students have made have not gone unnoticed. Certain thoughtful groups of concerned citizens within our district have urged this office to give this project the nation-wide publicity it deserves and also to move the content down further into the elementary school. We agree with those critics who say that we are long over-due in our efforts to reform the softness of the elementary curriculum.

Consequently, we are assigning to the 5th grade the community's telephone directory. Out of appreciation to those faculty members among our 7th grades who gave so much to our pioneer effort in this content area, we are assigning 7th grade teachers the exciting task of teaching the telephone directory of our State Capitol. The 6th grades, to make the study complete, will combine their study of French with at least one unit on various sections of the Paris, France, telephone directory. This dependent upon whether or not we can obtain government or foundation assistance to purchase the suitable directories, however.

You will hear more in September. Have a most pleasant summer.

The blue sheet slipped from Miss Clark's hand and floated to the floor, but she seemed not to notice.

The author finds transformational grammar preferable to structural linguistics even though the former approach entails some problems for classroom teaching. He then provides examples showing how transformational grammar might clarify questions concerning the assumptions which underlie curricula in composition.

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On the Role of Linguistics in the Teaching of English*

The growing enthusiasm on the part of many teachers of English for giving careful attention to linguistic matters is noteworthy for several reasons. It speaks well for the teacher since it suggests the birth of a scholarly concern for developments in the field of language study and a professional attitude toward linguistic insights which have potential educational value. Furthermore, this enthusiasm vindicates the many linguists who have held that linguistic science could be of importance in the teaching of English. But discussions of the relevance of linguistics to the teaching of English have been in progress for a considerable time now, and even the most cursory glance at the literature indicates a disappointing lack of progress. Few familiar with this debate and its meager results will disagree that one of the problems has

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been a continuing inability to answer satisfactorily the obviously central question, namely, "which linguistic description?"

The last thirty years has seen the development of a variety of descriptions of the structure of English. Among the more frequently mentioned proposals are the conceptions of Fries; the immediate constituent approach of Bloch, Wells, and Hockett; the phonological syntax of Trager and Smith, and Hill; Harris' morpheme to utterance procedures; and the two distinct transformational notions of Harris on the one hand and Chomsky on the other. The question of which, if any, of these linguistic descriptions might justifiably be employed in the classroom is, of course, many-sided. But one of the more frequently alluded to criteria is entirely linguistic in nature and is bound up in a general concern for the validity or correctness of linguistic descriptions.¹ The historical emphasis on validity or correctness seems entirely appropriate even though it does no homage to the popular pre-occupation with behavioral goals and outcomes as the basis for the evaluation of curricula. The issue is not whether the information contained in a given linguistic description can be taught and learned successfully, for surely there is no description which is so difficult that it cannot be taught and learned in some form,² but precisely one of the status of the information itself. One might hope to diminish the centrality of the content, thereby making it unnecessary, perhaps, to choose among the various linguistic descriptions, by demonstrating the utility of one or the other description in the teaching of literate skills, e.g., composition. But this hope should not be taken too seriously since the most recent account of empirical research in this area indicates the inconclusiveness of all such demonstrations.

Reviews of educational research, however, have continually emphasized that instruction in grammar has little effect upon the written language skills of pupils. The interpretation and curricular applications of this general conclusion have ranged from the view that grammar and usage should not be taught in isolation from written

¹ See for instance, Summer Ives, "Linguistics in the Classroom," *College English*, 17, 165-172; Donald J. Lloyd, "The Uses of Structure and the Structure of Usage," *The English Record*, 6, 41-46 and "A Linguistic Approach to English Composition," *Language Learning*, 3, 109-116; James Sledd, "Coordination (Faulty) and Subordination (Upside-Down)," in *Readings in Applied English Linguistics*, (henceforth *RAEL*), ed. H. B. Allen, New York, 1958; Robert J. Geist, "Structural Grammar and the Sixth Grade," *American Speech*, 31, 5-12; Archibald A. Hill, "Prescriptivism and Linguistics in English Teaching," *College English*, 15, 395-399; Robert C. Pooley, "New Approaches to Grammar," in *Perspectives on Language*, eds. J. A. Rycenga and J. Schwartz, New York, 1963; Henry Lee Smith, Jr., "The Teacher and the World of Language," *College English*, 20, 172-178; Owen Thomas, "Generative Grammar: Toward Unification and Simplification," *The English Journal*, 51, 94-99; and Charles C. Fries, "Advances in Linguistics," *College English*, 25, 30-37.

² This is a special case of J. S. Bruner's hypothesis that "any subject can be taught effectively in some intellectually honest form to any child at any stage of development" as proposed in his *The Process of Education*, Cambridge, 1961, p. 33.

composition to the position that formal grammar merits little or no place in the language arts curriculum.³

Thus, the validity of proposed linguistic descriptions remains the most pertinent consideration.

The major approaches to syntactic description can be collapsed under two rubrics. The first, which is known popularly as the *structural-descriptive* approach to linguistic analysis includes the work of Fries, Bloch, Wells, Hockett, Trager, Smith, Hill, and others.⁴ The second, the *transformational* version of generative grammar, is represented, for example, by the work of Chomsky, Halle, Lees, Klima, Matthews, and Postal.⁵ If the question of the validity of linguistic descriptions is to be spoken to in any serious way, it is necessary to consider two aspects of evaluation. The first pertains to the evaluation of a particular description within a given theoretical framework. For instance, which of two transformational descriptions of the relative clause structure in English is better? The second aspect of evaluation deals with the comparison of various forms of linguistic description. Is it possible, for example, to compare the structural approach to linguistic inquiry with the transformational approach in any meaningful way? In view of the well-documented interest in the validity of linguistic descriptions on the part of those involved in the educational implementation of these descriptions, it may be fruitful to examine the major approaches to linguistic inquiry in terms of evaluation in somewhat greater detail.

Underlying the structural view of language is a set of assumptions about the goals of behavioral studies and scientific inquiry which limit the range of relevant phenomena to a corpus of observed utterances. This limitation

³ H. C. Meckel, "Research on Teaching Composition and Literature," in *Handbook of Research on Teaching*, ed. N. L. Gage, Chicago, 1963, p. 974.

⁴ Charles C. Fries, *The Structure of English*, New York, 1952; Bernard Bloch, "Studies in Colloquial Japanese," *Readings in Linguistics*, (henceforth *RIL*), ed. Martin Joos, Chicago, 1951; Rulon Wells, "Immediate Constituents," *RIL*; Charles Hockett, "Two Models of Grammatical Description," *RIL*; Zellig S. Harris, "From Morpheme to Utterance," *RIL* and *Structural Linguistics*, Chicago, 1961; W. Nelson Francis, *The Structure of American English*, New York, 1958; Archibald A. Hill, *Introduction to Linguistic Structures*, New York, 1958; and George L. Trager and Henry Lee Smith, Jr., *An Outline of English Structure*, (Fifth Printing), Washington, 1957.

⁵ Noam Chomsky, *Syntactic Structures*, The Hague, 1957; Chomsky, "On the Notion 'Rule of Grammar,'" *Proceedings of the Twelfth Symposium in Applied Mathematics*, (henceforth *PAM*), 6-24 and *Aspects of the Theory of Syntax*, Cambridge, 1965; Morris Halle, "On the Role of Simplicity in Linguistic Descriptions," *PAM*, 89-94; Halle, "On the Bases of Phonology" and "Phonology in Generative Grammar," in *The Structure of Language*, (henceforth *SL*), eds. Jerry A. Fodor and Jerrold J. Katz, Englewood Cliffs, 1964; Robert B. Lees, *The Grammar of English Nominalizations*, Bloomington, 1960 and "A Multiply Ambiguous Adjectival Construction in English," *Language*, XXXVI, (1960), 207-221; Jerrold J. Katz and Paul M. Postal, *An Integrated Theory of Linguistic Descriptions*, Cambridge, 1964; Edward S. Klima, "Negation in English," *SL*.

suggests a curious contradiction since, quite invariably, representatives of the structural tradition speak of language as a set of behavioral patterns common to members of a given community involving a set of verbal interchanges between two or more people.⁶ There is no non-arbitrary upper bound on the number of acceptable utterances which could comprise the speech behavior of a given community. Thus the linguists of the structural school seem, at least implicitly, to be thinking of language as a potentially infinite set of utterances. But this position is completely contradicted by the properties of a structural linguistic description. All structural analysis is ultimately based upon observable data, i.e., data recorded by simple listening or by various instruments such as oscillographs, sound-spectrographs, and so on.⁷ If this methodological requirement is taken literally, then the result of a structural analysis, the linguistic description of a language, is actually a description of only a finite corpus of events. There is clearly an equivocation on the term "language" here which leads to two equally damaging conclusions. If an arbitrary natural language is taken to consist of an infinite set of sentences, then the results of a structural investigation do not constitute a description of language at all, but of something else. On the other hand, should a language be construed as nothing more than the corpus stored in a set of tape recordings, then the task of saying anything of scientific interest about the psychological and linguistic properties of the endless repertoire of sentences which not only define the language of a speech community but which are the personal property of every normal member of this community belongs to a branch of science other than linguistics.

The extreme pre-occupation with observable data in linguistic analysis probably stems from Leonard Bloomfield's particular version of scientific inquiry, a version which most structural linguists have accepted at face value. In Bloomfield's view, science dealt exclusively with accessible events and the task of scientists was the induction of general laws from these events.⁸ Thus, the central object of investigation in a linguistic science as conceived by Bloomfield was necessarily actual speech. For Bloomfield, the only information of scientific interest was that provided by physical phonetics and the context in which phonetic data were observed.⁹ This view is implicit in all structural work and one never finds a popularization of structural linguistics which does not give prominence to assertions about the centrality of speech.¹⁰

⁶ W. Nelson Francis, "Revolution in Grammar," *Quarterly Journal of Speech*, 40, 299-312, especially Section 2.

⁷ Francis, *The Structure of American English*, pp. 15-16.

⁸ Leonard Bloomfield, *Linguistic Aspects of Science*, Chicago, 1955.

⁹ Bloomfield, *op. cit.*, p. 21 and *Language*, New York, 1933, especially Ch. 2.

¹⁰ For instance, George P. Faust, "Terms in Phonemics," *College Composition and Communication*, 5, (February, 1954), p. 30.

For our purposes, the effects of Bloomfield's views on the goals of linguistic inquiry are more important than the causes. By restricting the domain of linguistic investigation to phonetic and contextual data, Bloomfield excluded a vast range of perhaps even more accessible data as linguistically and scientifically useless; this data being the extraordinarily rich body of knowledge which a human speaker has about his language. We will return to this neglected aspect of linguistic information later.

The goal of linguistic science, to determine inductively the laws governing the behavior of observable linguistic data, was unfortunately one step removed from the problem immediately confronting those linguists who were anxious to adopt the Bloomfieldian point of view. The induction of general laws from a body of data presupposes a prior classification of this data. For structural linguistic inquiry, this meant that a requirement for further research was the precise specification of the relevant facts. It was necessary to decide on the linguistic importance of the various aspects of the continuous flow of sound coming from the recording device or from the speaker directly. Thus, in a certain sense, the task before the structural linguist was "pre-scientific": To provide materials upon which a science of language could operate productively. Central to the search for the facts of language was also a concern for the general efficiency with which these facts could be stated.¹¹ The overall problem, therefore, consisted in providing a methodology which would yield the facts of language in terms of a consistent and optimally efficient classificational scheme.

The structural methodology for discovering the facts of language is now quite well known. In its most general formulation, the method involves a set of putative discovery procedures which are supposed to isolate automatically a set of linguistic units in a hierarchical arrangement and to present an inventory of the speech data which are found to represent these units. Quoting from what is probably the most widely known structural analysis of English,

The presentation of the structure of a language should begin, in theory, with a complete statement of the pertinent linguistic data. This should be followed by an account of the observed phonetic behavior, and then should come the analysis of the phonetic behavior into the phonemic structure, completing the phonology. The next step is to present the recurring entities—composed of one or more phonemes—that constitute the morpheme list, and go on to their analysis into the morphemic structure. In that process the division into morphology and syntax is made. After the syntax, one may go on from the microlinguistic (linguistics proper—phonology and morphemics) to metalinguistic analyses.¹²

¹¹ For discussion see Charles Hockett, "A System of Descriptive Phonology," *RIL*, p. 101 or Archibald A. Hill, *Introduction to Linguistic Structures*, especially Ch. 4, Sec. 1 on the classification of sounds.

¹² Trager and Smith, *op. cit.*, p. 8.

Structural linguists have been more successful in proposing and employing discovery procedures which fairly effectively produce an analysis and classification of sound sequences than they have in determining the measure or measures to be used in evaluating the adequacy of these classifications in terms of efficiency. An important issue is involved in the failure of the structural linguists to come to grips with the problem of evaluation. The question of which measure of efficiency will most appropriately evaluate alternative structural descriptions has no obvious answer. How do we know what the right measure is? Is efficiency to be defined in terms of the number of discrete symbols or entities in a description? Is it going to have anything to do with the type of symbols which the description utilizes? These questions cannot be answered without proposing a set of conditions which the measure of efficiency must meet. Suppose I am working for a grocer and he tells me to unpack a crate of oranges and to construct the most efficient display of oranges in the front window. Unless the grocer tells me the conditions that the optimally efficient arrangement must meet, my task is an impossible one. Similarly, unless a set of conditions on the measure of efficiency for linguistic descriptions is established, there is no reason to choose one measure of efficiency over another. Such conditions cannot be an aspect of the subject matter in a science of language, as conceived by Bloomfield, since they would constitute a level of abstraction which has no observable basis whatever. If, on the other hand, such conditions are taken to be theoretical constructs, laws governing the form that a linguistic description may take, then the whole business becomes circular since such laws can be inferred only from a classified set of data in the first place. Since there is no non-arbitrary measure of efficiency which can be employed in the evaluation of alternative structural descriptions of a set of observed data, it is impossible to compare and rank these descriptions.

Furthermore, the taxonomic framework provides no basis for choosing between structural and non-structural descriptions. The fundamental problem here is that a structural linguistic description is a taxonomic classification. No such classification, whether it be of books in the library, fish in the sea, or sounds of speech, can be right or wrong, valid or invalid, true or false. Such a classification is inevitably nothing more than an arrangement of the data which makes no claims whatever about the nature of the data. A linguistic theory which is capable of evaluating the form of a linguistic description must presuppose an explicit statement of the facts which any adequate description must represent and characterize. Given such a statement it is not only possible to develop a theory which will decide on the adequacy of linguistic descriptions in terms of their ability to characterize the facts; it is absolutely necessary to develop such a theory. Without it, there is no possibility

of determining the success of any type of linguistic description claiming to account for these facts.

The most readily accessible body of facts about language is the information which is available to any speaker concerning his native language. There are several aspects of a speaker's linguistic competence on which considerable consensus is found in the literature.¹³ A speaker can understand sentences which he has never heard before. Similarly, he can produce new sentences on the appropriate occasion. Second, a speaker knows implicitly that certain sentences in his language are ambiguous while others are not. Still other sentences are synonymous. Third, he is capable of detecting differences in the relations which words have to one another in sentences even though these relations are not explicitly specified in the phonetic representations of sentences. Many other similar abilities could be cited.

Bloomfield and his followers have rejected such linguistic data with the assertion that introspective evidence involves a spurious mentalism which fails on the grounds of non-objectivity.¹⁴ On this view, one's intuitions about language exist only in the private domain, in one's mind, and are thus not fit materials for a science of language. Essentially, the argument is that the mind is inaccessible to scientific investigation because the attributes of the mind, such as linguistic intuition, are not subject to objective study. Intuitions are not physical events which can be monitored and recorded. Thus the study of linguistic data dealing with the speaker's knowledge of his language necessarily belongs to some field other than linguistic science. This view has been severely criticized in the recent linguistic and philosophical literature¹⁵ and little new can be added to the discussion. If it is the case that any significant linguistic theory must provide evaluation criteria for linguistic descriptions, then the consistency of the introspective data brought forth in support of such a theory is clearly a major consideration. The consistency of introspective evidence is not, however, non-empirical, i.e., incapable of being verified. Suppose one asks, for instance, how to test the judgment that the implicit subject of the complement verb "leave," in the sentence "the boy promised his mother to leave the party early," is the same as the explicit subject of the whole sentence, "the boy," and that the implicit subject of the same verb in the sentence "the boy told his mother to leave the party

¹³ The various linguistic abilities possessed by native speakers of a language are discussed in much of the transformational literature. In the educational literature, see Lees, "Transformation Grammars and the Fries Framework," in *RAEL*, pp. 137-146, and Paul M. Postal, "Underlying and Superficial Linguistic Structures," *Harvard Educational Review*, 34, 246-266.

¹⁴ See, in particular, Bloomfield, *Linguistic Aspects of Science*, pp. 12-13, and Archibald A. Hill, "Linguistics since Bloomfield," *Quarterly Journal of Speech*, 41, 253-260.

¹⁵ The most extensive remarks on this subject are found in Jerrold J. Katz, "Mentalism in Linguistics," *Language*, XXXX, 124-137.

early" is the same as the object of the verb "tell," i.e., "his mother." This is not only an empirical question, but one with an obvious answer. This supposedly non-objective fact will be attested to by every normal native speaker of English who understands the question. Objectivity, therefore, is not a property which a theory of the speaker's linguistic knowledge necessarily lacks and it is probably pointless to devote further consideration to such objections.

Adopting the view that an adequate linguistic description must account for the speaker's linguistic capacities, we can think of a linguistic theory as being, at least in part, a set of constraints on the form of any description which can attain this end. The constraints specify, in other words, the way in which the goals of the linguistic inquiry can be attained. The linguistic theory acquires, therefore, the capacity to evaluate possible linguistic descriptions in terms of their ability to characterize the speaker's knowledge of his language. Such a theory is said to explain the speaker's knowledge because the form of the linguistic description which most adequately accounts for the facts is a logical consequence of the constraints comprising the linguistic theory.¹⁶

In this view of linguistic inquiry, the object of research is two-fold: First, to determine precisely the constraints, or laws if you will, which govern the form of the constructs employed in the linguistic descriptions which best characterize the varied instances of human linguistic ability; second, to determine the particular instances of the descriptive constructs within an arbitrary language. The latter constitutes the actual construction of a linguistic description. Recent work on the transformational version of generative linguistics represents the first modern attempt to develop a linguistic theory and a descriptive apparatus which have as a goal the explanation of the speaker's linguistic knowledge. The literature contains a substantial amount of material on both aspects of linguistic inquiry and no reiteration is called for here.¹⁷ The virtue of a transformation approach to linguistic research from the standpoint of the issue of validity is that if a particular version of linguistic description fails to satisfy the constraints imposed by the linguistic theory, then it can be said with justification that the description is wrong. Similarly, if the constraints on the form of the linguistic description do not result in a set of descriptive constructs which satisfactorily account for the facts, then this version of the theory is wrong. Measures for determining the

¹⁶ See Chomsky, "Three Models for the Description of Language," *I. R. E. Transactions on Information Theory*, Vol. IT-2, (1956) and "Explanatory Models in Linguistics," *Logic, Methodology, and Philosophy of Science*, eds. E. Nagel, P. Suppes, and A. Tarski, Stanford, 1962, 528-550. An exceptionally lucid presentation of the more important issues relating to explanation in science is found in Israel Scheffler, *The Anatomy of Inquiry*, New York, 1963.

¹⁷ See the transformational literature referred to earlier.

validity of a particular description of a given language as well as a general form of linguistic description are consequently provided.

The discussion of evaluation procedures for contemporary versions of linguistic research provides one fruitful avenue for confronting the issue of the validity of linguistic descriptions. The basic result of this discussion is the finding that the structural approach to linguistic inquiry fails to provide a principled basis for choosing among particular linguistic descriptions and forms of linguistic description. (The fact that taxonomic linguistic descriptions can be evaluated in terms of internal consistency is irrelevant since any linguistic description can be judged in this way.) It would not seem unreasonable, therefore, to exclude structural linguistics from further consideration and to pass over to the deeper and ultimately more important question concerning the pedagogical implementation of a verifiable linguistic theory and description of the structure of English. It is natural to inquire, at this point, into the purely linguistic bases for a program designed to incorporate the valid results of linguistic research into the curriculum. Such an inquiry may prove of little value, however, since certain considerations deriving from what is already known about the nature of the constructs employed in a transformational description of language indicate that the constructs themselves do not and cannot automatically provide any new educational insights. Rather, the ultimate value of valid linguistic descriptions in the teaching of English seems to depend entirely on the ingenuity and imagination of linguists, teachers, and educators competent in both areas.

A transformational grammar characterizing linguistic competence is a finite specification of the infinite set of pairs of phonetic signals and semantic interpretations comprising the sentences in a natural language. This specification is abstract in the sense that it is not detectable on the basis of the physical data alone. It must be inferred from the knowledge which people have about sentences in their language. The specification is, in effect, an abstract representation of this knowledge offered in terms of hypothetical syntactic structure upon which semantic interpretations and phonological realizations are defined. The necessity of positing such abstract sentence structures and the form that these structures must have is a topic to which much attention has been devoted.¹⁸ The formal apparatus employed in the explanation of the speaker's ability to deal with the infinite set of sentences in his language consists of a set of ordered rules which recursively enumerate the sentences of

¹⁸ For discussion of the formal aspects of transformational grammars see Chomsky, "Three Models for the Description of Language," (Cf. note 16); also "On the Notion 'Rule of Grammar'," (Cf. note 5) and "Formal Properties of Grammars," in *Handbook of Mathematical Psychology*, (henceforth *HMP*), eds. R. D. Luce, R. R. Bush, and E. Galanter, New York, 1963; Chomsky and George Miller, "Finitary Models of Language Users," and "Introduction to the Formal Analysis of Natural Language," in *HMP*.

this language. The structures underlying sentences, often represented by tree diagrams, are not objects of substance having material existence in the real world; rather they merely constitute a record of the application of a particular set of rules.

The rules in a transformational grammar are quite different from the rules countenanced by prescriptive linguistic descriptions and from the instructions for sentence building found in so many textbooks. The rules postulated in the syntactic component of a transformational grammar are either those which specify a set of abstract underlying structures, upon which a semantic interpretation for the sentence is based, or those which derive *superficial*, alternatively *surface*, structures, which receive a phonetic interpretation, as a function of the underlying structure.¹⁹ These claims about the nature of the rules employed in an adequate description of syntax suggest that recent educational popularizations of transformational grammar have grossly misunderstood the results of transformational research. To quote from one textbook published very recently.

This chapter is a study of *transformational* grammar. *Transform* means "to change;" thus, you will see how basic sentences are changed, or transformed, to produce other sentences that are interesting and varied.²⁰

Ongoing work in transformational grammar shows that it is incorrect to think of two sentences as being related by a transformational rule or set of rules which somehow convert one sentence into another. Rather, when various considerations force the conclusion that two or more sentences are syntactically related, this relation is reflected in those aspects of underlying structure which both sentences share. Thus the burden of representing a common source for two or more sentences falls not on the transformational rules of the grammar which generate surface structures, but on the rules which generate underlying structures.²¹

The abstract constructs offered in a transformational description are designed solely for purposes of description and explanation. Neither the transformational theory nor the transformational description of the syntax of English contains any implicit pedagogical recommendation. From neither does it follow that a transformational description of English should be taught in the classroom. From neither does it follow that instruction in transforma-

¹⁹ See Chomsky, *Aspects of the Theory of Syntax*, and Postal, "Underlying and Superficial Linguistic Structures."

²⁰ Mellic John and Paulene M. Yates, *Building Better English*, (Fourth Edition), New York, 1965, p. 463.

²¹ Several illustrations of common underlying structure for related sentences are given in Peter S. Rosenbaum, *The Grammar of English Predicate Complement Constructions*, MIT Doctoral Dissertation, (1965), *passim*.

tional grammar will improve performance in the literate skills. With respect to the latter assertion, consider an analogy from physical education, in particular the pedagogy of the forward pass. Any instance of the physical event identified as a forward pass has certain mechanical properties which are characterized by the Newtonian theory of mechanics. The descriptive apparatus of this theory, consisting of such constructs as mass, acceleration, velocity, time, distance, and so forth, is a consequence of the theoretical constraints imposed upon a description seeking to account for the mechanics of physical events. To teach a potential quarterback the mechanics of the forward pass is to teach him how this type of event works. It is not to teach him how to make it work. The Newtonian theory itself gives us no reason to believe that instruction in the mechanics of the forward pass will affect the quarterback's becoming a good passer one way or the other. Similarly, to study and practice the constructs of a transformational grammar may result in an understanding of how the student's language works, but not necessarily in an understanding of how to make it work.

But the mere fact that the answers to various educational problems do not spring forth full blown from the linguistic research on transformational grammars does not imply that the results of this research will fail to provide a new and valuable dimension in which to consider traditional problems in the teaching of English. This fact simply asserts that a linguistic description does not enumerate educational benefits. It remains not with the linguistic theory or description, but with the informed educator, whether he is a teacher, linguist, or specialist informed in both areas, to determine the applicability of valid linguistic results to the teaching of English. It may prove informative to devote the remaining pages to a brief illustration of some of the ways in which a transformational approach to language study can make significant contributions to the field of English teaching. The purpose of the following discussion is not to provide a complete manual of applications, but merely to indicate the wide range of educational situations in which the results of transformational research might be utilized. The three cases to be presented concern 1) the content of the English curriculum in general, 2) the evaluation of certain traditional criteria employed in the evaluation of composition, and 3) a possible explanation for the continuing lack of correlation between instruction in grammar and improved performance in the literate skills.

The desirability of including a description of the structure of English in the English curriculum, whether this description be traditional, structural, or transformational, is ultimately a matter of judgment; it is a matter of belief. But the decision is no easier to make for all that it precludes the frustrations often accompanying empirical evaluations. On the contrary, the resolution of this issue demands recourse to a set of principled reasons which provide sup-

port for the opinion that there is virtue in instruction in linguistic descriptions. The establishment of such a set of reasons, not to mention their subsequent assessment, is a matter of great complexity. This assertion assumes some importance in view of the fact that the single generally accepted reason for teaching linguistic descriptions turns out to be no reason at all. Reference is being made here to the contention that so called "normative values" in the use of language should be taught and are best taught by means of a suitable linguistic description. Since the object of such instruction is a prescribed performance of spoken and written English, normative considerations do not defend instruction in linguistic descriptions on the grounds of any value which inheres in the subject matter independent of behavioral goals. Rather, they provide a reason for using linguistic descriptions pedagogically in order to achieve certain performance effects in the use of language. There may indeed be merit in achieving these effects, but it is of importance to recall that a belief in the power of instruction in grammar to accomplish this task flies in the face of overwhelming empirical evidence that there is no connection between instruction in linguistic descriptions and the performance of literate skills.

It is a particularly curious fact that normative considerations have often been construed as a reason for ranking a traditional grammar over both structural and transformational grammars. The basis of this argument resides in the assumption that normative values are maintained in a traditional grammar while they are neglected totally in other forms of linguistic description. This argument becomes vacuous when we observe that normative values pertain not to a linguistic description, but to a particular language, in this case a special dialect of English, described by a linguistic description. Any form of description which takes as its subject matter this special dialect of English can be said to be normative. Thus, normative considerations not only fail to offer a good reason for incorporating an arbitrary linguistic description into the English curriculum, they also fail to provide a reason for introducing a specific linguistic description into the curriculum.

Implicit in the goals of a transformational theory of language and the grammars which follow from this theory are several new considerations. A transformational grammar is a system which reveals and expresses the regularities which underlie a given natural language as completely as possible. In providing the most general account of linguistic structure, the transformational approach to linguistic inquiry yields new insights into human intellectual capacity, namely, those innate properties of the human mind which allow for the acquisition and use of language. In pursuing this capacity through the linguistic mechanisms which underlie competence in language, the student is involving himself in a study which has had intrinsic intellectual appeal for centuries, the study of those abilities which make human

beings human. The fact that linguists working on syntax have, as yet, treated only the broad outlines of an adequate grammar suggests that this study is a living field, one whose issues provide significance both for studying the results thus far attained and for following the stated aims further. There seems good justification, therefore, for the inclusion of the results of the transformational approach to linguistic inquiry in the English curriculum. The educational implementation of a transformational description of the structure of English not only introduces the student to the live tradition of scholarship in language study, but, perhaps even more important, to the results of the one form of inquiry which has begun to achieve some success in providing an explicit account of one aspect of an extremely complex human competence. It would seem fitting to support the educational implementation of any linguistic description which can justifiably claim success in this area. In any case, it is a non-trivial virtue of the transformational approach to language study that it provides a rationale with which it is at least possible to disagree. This in itself is an event of some importance in the history of classroom applications of linguistic descriptions.

The second illustration is concerned with the fact that the design of curricula for the teaching of composition is conditioned by a variety of factors which take the form of accepted canons for good writing. These canons invariably include such items as clarity (meaning non-ambiguity), grammaticality, logical structure, and so forth. On one level of analysis, these constraints, as well as many others, are entirely reasonable since they set necessary conditions for successful written communication. This fact, however, does not imply that these canons may not, in certain ways, be contradictory. For instance, might it not be the case that to satisfy the condition of clarity it would be necessary to break a rule of grammar, and conversely? A conclusive exploration of this possibility will necessarily depend upon the use of a theoretical framework for language analysis in which considerations of both clarity and grammaticality play a role.

Exploiting a transformational analysis of English, one can prove that the canons for good writing are quite often in conflict. In a typical example, the rule of clarity is incompatible with the grammatical rule disallowing the infamous "split infinitive" construction. It can be shown, furthermore, that emphasis on the former must actually reinforce the use of the latter. By way of illustration, consider the following ambiguous sentence:

- (1) Joshua commanded the children to shout forcefully

This sentence is at least two ways ambiguous. The adverb "forcefully" could modify either the main verb "command" or the verb in the complement sentence "shout." In other words, either the "command" could have been "force-

ful" or the "shout" could have been "forceful." Seeking to conform to the canon of clarity, a student writer must convert this sentence into some non-ambiguous form. One mechanism of disambiguation which English allows is the application of an extremely general transformational rule which places an adverb, originating at the end of a verb phrase (i.e., that constituent containing the verb and, optionally, a verbal object), immediately before the verb. For instance,

- (2) John swept the floor vigorously
- (3) John vigorously swept the floor

In this fashion, sentence (1) can be disambiguated to specify the interpretation of the sentence in which the adverb "forcefully" modifies the main verb "command," as in sentence (4).

- (4) Joshua forcefully commanded the children to shout

The adverb placement transformation has the peculiar property that it usually can apply only if a verb is, in fact, the first element in the verb phrase. Thus, in infinitival verb phrases like "to shout," the adverb placement transformation cannot apply since the "to" and not the verb "shout" is the first element.²² If the adverb placement transformation is forced to apply, that is, if the rule is broken, then split infinitive constructions necessarily result, as in sentence (5).

- (5) Joshua commanded the children to forcefully shout

The student writer is caught, therefore, on both horns of the dilemma. If he wishes to disambiguate sentence (1) in such a way as to specify the interpretation of this sentence in which the adverb "forcefully" modifies the complement verb "shout," he must break the adverb placement rule thereby producing a split infinitive construction. If, on the other hand, the preservation of grammaticality is the student's primary concern, then sentence (1) must remain ambiguous.

This logical bind is not the fault of the teacher, who is concerned with compositional excellence defined at least in part in terms of clarity. Nor is it the fault of the student, who is simply incapable of meeting this demand without restructuring his language. Nonetheless, the logical dilemma exists and it becomes clear that, short of ruling all infinitival constructions out of English, a poor compromise, either the canon of clarity must be weakened or the split infinitive must be accepted into the domain of fully grammatical constructions.

This demonstration is presented as evidence that the problem of the split

²² A defense of this analysis is provided in Rosenbaum, *ibid.*

infinitive is not the normative-moral dilemma that it has been conceived to be for such a long time.²³ Similar evidence could be presented for a variety of cases. The transformational perspective provides a tool for examining the consequences of whatever decision is made or, for that matter, of making no decision at all. Deliberation without reasons leads nowhere. The history of the split infinitive is a case in point. It is true, to be sure, that a transformational grammar will not provide the principles for assessing the reasons which bear on the issue of the split infinitive and similar constructions. But this approach to the study of language will provide the raw material for the exercise of judgment; it will provide coherent reasons, and this can only be viewed as a major contribution to the solution of a traditionally muddy set of problems.

The third illustration deals with the outlines of a possible explanation for the continuing failure to find successful classroom techniques for changing linguistic performance in speech and composition. The general premise of this explanation is that certain aspects of this problem are the consequence of gravely underestimating the complexity of dialect differences and the problems involved in altering dialects on the syntactic level. It does not take a linguist to determine that there is considerable dialect variation in the United States on the phonological level and on the lexical level, that is, the levels of sound and meaning. But only very recently has it been shown that dialect differences on the syntactic level are far more systematic than has heretofore been recognized.²⁴ It will prove informative to explore this finding in slightly greater detail.

It is difficult to find a textbook on grammar which does not point out the alternation of the word "for" in the following sentences.

- (6) a. Mary would hate for the boys to arrive early
- b. Mary would hate the boys to arrive early

Similarly, such textbooks usually describe the alternation of "'s" in the following sentences.

- (7) a. does your mother dislike your brother's coming home late
- b. does your mother dislike your brother coming home late

Simply looking at the linear sequence of words in these pairs of sentences, one finds little reason to suspect that the deletion of "for" in (6b) has anything whatever to do with the deletion of "'s" in (7b). The "for," for in-

²³ For an interesting discussion and sufficiently complete bibliography see R. C. Pooley, *Teaching English Usage*, New York, 1946, especially pp. 100-106.

²⁴ Rosenbaum, "A Transformational Approach to a Syntactic Dialectology," a paper delivered to the December, 1964, meeting of the Linguistic Society of America in New York City.

stance, precedes the subject of the complement sentence, "the boys;" the "s" on the other hand, follows the subject of the complement sentence, "your brother."

Considerations brought to bear in the development of a general theory of complement structures, of which (6) and (7) are instances, indicate that the initial impression, based solely upon examination of the linear sequence of words, is incorrect.²⁵ In the most general description of such complement constructions both the "for" and the "s" are shown to share exactly the same position in the underlying structure of these sentences. Furthermore, both the "for" and the "s" are optionally deleted by exactly the same transformational rule. In other words, (6a) is provably related to (6b) in precisely the same way as (7a) is related to (7b), that is, by the transformational rule which deletes "for" in (6) and "s" in (7).

Implicit in this description is the claim that judgments about these pairs of sentences made by native speakers of English will conform to the linguistic description. In other words, the grammar predicts that the speaker of the dialect of English in which sentence (6a) is preferred over sentence (6b) will also prefer sentence (7a) over sentence (7b). If the deletion of both "for" and "s" is correctly characterized in terms of a single rule, then the speaker who does not allow the deletion of "for" also will not allow the deletion of "s." On the other hand, the speaker whose grammar contains this single rule will delete both "for" and "s." Preliminary empirical investigations, which are being reported elsewhere in much greater detail,²⁶ seem to confirm this prediction.

If it is true, as the above considerations suggest, that superficially diverse linguistic forms are psychologically related, then the task of affecting changes in the linguistic system of a speaker becomes immeasurably more complex. Consider, for instance, the plight of the teacher of composition who is anxious to preserve the grammatical dictum common to many textbooks that the "s" as in (7a), should not be deleted. It will not be sufficient merely to reinforce the gerundive constructions with the "s," for every performance of sentences like (6b) to which the student attends may reinforce exactly the opposite usage from that which the teacher desires to elicit. Three other factors make this problem even more complex. First, it may well be that the teacher will consider the syntactically related linguistic forms to be fully grammatical, in which case the probability of producing contradictory behaviors is quite high. In other words, "for" may be deleted in every infinitival complement construction which the teacher utters. Second, it is folly to as-

²⁵ Rosenbaum, *The Grammar of English Predicate Complement Constructions*, p. 25.

²⁶ Thomas G. Bever, Peter S. Rosenbaum, "The Psychological Verification of Linguistic Rules," (forthcoming).

sume that the linguistic environment outside of the classroom could be appropriately controlled to any significant degree. Finally, and perhaps most problematical, it is not impossible that other rules in the speaker's grammar which are requisite to the production and comprehension of sentences whose grammaticality is beyond question will reinforce the rule which deletes "for" and "'s."²⁷ In this eventuality, the only way out is an absurdity; to eliminate the reinforcing transformations by somehow ruling the grammatical sentences requiring these rules out of English.

The intent of the third illustration is to argue that the failure of current teaching techniques based on instruction in grammar to implement significant changes in linguistic performance is predictable from the fact that the tasks which these techniques must perform are virtually unknown. To affect a permanent change in linguistic behavior is to affect a change in grammar, the set of rules underlying linguistic competence, with all that such a change might entail. Certain requirements on alterations of this sort were mentioned above, but those were merely suggestive. It would be wildly presumptuous to speculate on the possibility of improving teaching techniques at the present time. The issue of an improved pedagogy can be addressed seriously only at such time as an explicit account of the linguistic rules which characterize linguistic behavior becomes available. Perhaps our vision of the ultimate task as one of changing linguistic behavior will prove completely misguided. Economy, if nothing else, dictates that it is better to find out what the problem is before trying to solve it. To the extent that transformational grammar continues provide insights of increasing depth into the structures underlying linguistic ability, it would seem only good sense to exploit this form of inquiry to its fullest capacity.

If the preceding arguments are sound, then not only can the transformational approach to linguistic inquiry claim priority in further discussion of the role of linguistics in the teaching of English, but the structurally oriented suggestions for the teaching of English which have actually found use in certain classrooms must be reconsidered. This conclusion should be taken as positive evidence that a new stage in the development of linguistic science is upon us and that the educator may begin to profit from giving his attention to the results of the ongoing linguistic debate. It has taken American linguistics some time to devise theories which can offer valid results for educational purposes, but the time has come. It is now up to all of those persons who are in any way concerned with the teaching of English to respond to this provocative and important new challenge.

²⁷ A case having just these properties is described in Rosenbaum, *The Grammar of English Predicate Complement Constructions*, pp. 104-119.

A synthesis of ideas gleaned from a number of Cicero's writings provides the framework for an examination of Cicero's conception of education for humanitas. The author suggests that previous commentators have failed to construe this conception broadly enough.

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Cicero: Education for *Humanitas**

The ultimate objective of Cicero's educational theory, especially as it is set forth in *de Oratore*, is based on his conception of *humanitas*. As Gwynn states it in his study of Roman education:

The truth is that neither 'philosopher' nor 'orator' is an adequate term for Cicero's [educational] ideal. Only one word gives full expression to that ideal—*humanitas*, or its corresponding epithet, *humanus*. . . . The word . . . runs like a thread of gold through all the discussions and digressions of the *de Oratore*, taking on countless shades of meaning under the play of Cicero's thought, but always recalling in its varying use the fundamental ideal of human excellence. . . . To be a man in all that is most human, and to be human in one's relations with all other men; that is Cicero's ethical and social ideal, and his educational theory is based on the same principle.¹

Ideally, the program of studies for achieving this "fundamental idea of human excellence" would include the entire province of human and divine knowledge. Cicero is a practical man of affairs, however, and early in *de Oratore* he pares the ideal down to realizable dimensions: In practice the necessary course of studies includes the ancient *artes liberales*, especially lit-

* I am grateful to the University of Massachusetts Research Council for a small grant for books which assisted greatly in the preparation of this study.

¹ Aubrey Gwynn, S. J., *Roman Education from Cicero to Quintillian* (Oxford, 1926), pp. 119-20.

erature and rhetoric, and a higher program in history and tradition, jurisprudence, and philosophy. It is by means of this training that the young are educated into humane and humanistic ways.

Cicero's statement of objective and recommended educational program are common knowledge to anyone familiar with classical educational thought. What is not immediately apparent is the relationship between the two: how and why will the study of the liberal arts, history, law, and philosophy educate a man for *humanitas*? That is to say, what is there within the study of these subjects which uniquely fit them for training a man into Cicero's ideal of human excellence?

Surprisingly, a close scrutiny of the commentaries on Cicero's educational theory fails to reveal an awareness of this question. Gwynn, for example, vindicates *de Oratore's* program of studies on utilitarian grounds rather than as contributing to education for *humanitas*. "History," he claims, "has a double value in [Cicero's] eyes: it links us with the past, and it is invaluable as a storehouse of rhetorical illustrations. 'An orator must know all the countless lessons of antiquity,' he says in the *de Oratore*; and in the *Orator*, the *Brutus*, and *Hortensius* he stresses the value of national history for the same purpose."² The study of history will make us better orators by furnishing a wealth of rhetorical illustrations, but nothing is specified as to how it will aid in imparting *humanitas*.

Gwynn's treatment of the study of law is similar. Even more than with history, the orator—the advocate who daily speaks before the jury, the judges, the Senate, and the people—has a utilitarian reason for studying law; for surely, as Cicero frequently points out, nothing is more absurd and embarrassing than an orator, unfamiliar with jurisprudence, arguing a point of law. But as with history, his analysis fails to disclose how it contributes to *humanitas*.

Finally, in the all-important study of philosophy, Gwynn again fails to show how Cicero links it with *humanitas*:

The pith of the argument [for studying philosophy] as stated by Crassus may be summed up in a single phrase. . . . "Abundance of matter will give abundance of words:" that principle is at the root of all his educational theory, both in the *de Oratore* and in the later dialogues. Psychology, ethics, politics, dialectics, even physics: all these must be studied, *not for their own worth, but because without them an orator may fail in the knowledge required for his practical work.*³

Philosophy is studied so that when the orator is performing his task as an orator he may draw on a vast storehouse of information for illustrations, for

² *Ibid.*, pp. 105-6.

³ *Ibid.*, pp. 112-13. My italics.

general topics related to the particular questions, and for other materials; but there is no suggestion as to the humanizing influence of philosophy.

While Gwynn's study is the only educational work that deals with Cicero's theory in depth, other scholars have broached the subject also, although again without suggesting the precise function of the program in *de Oratore* in effecting *humanitas*. To mention one famous example, E. K. Rand, in a lecture on "The Humanism of Cicero," outlines Cicero's liberal arts curriculum, but without meaningfully conjoining it with the stated educational objective of *humanitas*:

[Cicero] names as the arts whereby the training of a gentleman is effected . . . geometry, music, the study of literature . . . [and] the natural sciences. Arithmetic . . . is presupposed. So . . . is astronomy. Grammatica also . . . is said to comprise a study of the poets, a knowledge of history, and interpretation of words. . . . Such, then, was the training whereby the young . . . are 'moulded in humanism'—*artibus quibus aetas puerilis ad humanitatem informari solet*—or, let us translate it in a simpler way, 'learn how to become human.'⁴

In the present paper I propose to deal with the relationship between Cicero's educational program, especially the study of philosophy, and the achievement of *humanitas*. Since the relationship of the two is contingent upon thoroughly understanding *humanitas*, I will commence with a definition and analysis of this conception as it appears in Cicero's writings. Later I will return to educationally relating this conception to the study of the liberal arts, history, jurisprudence, and philosophy, again by synthesizing remarks gleaned from many of Cicero's works.

Cicero's conception of *humanitas* encompassed at once the Greek ideas of *philanthropia* and *paideia*. In the former sense the term included the qualities of helpfulness and consideration of one's fellowman. In the same sense it comprehended the social graces: appropriate manners, tolerance, politeness, and moderation: What is more characteristic of *humanitas*, asks Crassus in *de Oratore*, than "talking that is polite and cultivated?"⁵ *Humanitas* denoted a civilized and cultivated man, one who would be "the opposite of wild, brutal, bestial. He will be mild, gentle, merciful, compassionate, benevolent. He will be loyal to duty, upright, virtuous. He will have the social graces, possessing tact, courtesy, forbearance of others, *savoir faire*."⁶

⁴ E. K. Rand, "The Humanism of Cicero," in *Proceedings of the American Philosophical Society*, 71, 1932, pp. 210-11. For other references see Gwynn's comprehensive bibliography and the Introductions, especially Wilkins', to the various editions of *de Oratore*. It will be understood that I am not criticizing scholars outside the fields of educational theory for not dealing with this question when it concerns them only peripherally. My only intention is to show that neither in educational literature nor elsewhere is the problem suitably handled.

⁵ *de Ora.*, i, 32.

⁶ Rand, *op. cit.*, p. 212.

There were also strong intellectual and literary overtones to Cicero's conception of *humanitas*: It was an effort to achieve an intellectual and literary culture in the sense of *paideia*, that subtle Greek term which implied both learning in the liberal arts and the culture consequent upon such learning.⁷ It included the education as well as the life of a cultivated gentleman, the refinement and taste of an aristocratic nobleman who understands what it means to be human. In a characteristic phrase, Cicero states that "only those are men who are perfected in the arts appropriate to humanity," that is, the liberal arts; for these men combine in their lifetimes a gracious affability with a study of classical language and literature.⁸

These summaries suggest that *humanitas* was at once a social and an individual conception. It was social in the sense that it attempted to meet the increasing complexities of social life in Rome by superimposing Greek culture onto traditional Roman virtues. Rome's unprecedented growth during the second and first centuries was accompanied by rapid economic and social dislocations; for example, the inevitable class tensions that resulted from the drift of uprooted yeoman farmers to Rome, the problem of franchise and the extension of citizenship, the economic growth of the equestrian order, and the multifarious other problems which emerged subsequent to the second Punic war. All of these factors contributed to transforming republican Rome from a homogeneous city into a hurly-burly sort of place with multi-class interests and multi-racial temperaments.⁹

During the second century it became increasingly evident that the harsh virtues and fierce patriotism of traditional Rome, while worthwhile, were not enough to cope with the current social problems. Patriotism needed to be humanized as Rome extended beyond her walls and beyond the sea; it needed kindness and sympathy to soften its provincialism while maintaining its traditional self-discipline and strength of will. As a social conception *humanitas* was intended to mitigate this harshness; it was the basis for maintaining harmony among various classes and interest groups, *concordia ordinum*, while retaining the basic governmental forms of the traditional republic.

⁷ Gellius, *Attic Nights*, xii, 17.

⁸ *de Rep.*, i, 28; cf. M. Van Straaten, *Panétius* (Amsterdam, 1946), p. 220, and E. V. Arnold, *Roman Stoicism* (Cambridge, 1911), p. 381.

⁹ For a thorough treatment of the conditions surrounding and contributing to the dissolution of republican Rome see such recent works as R. E. Smith's *The Failure of the Roman Republic* (Cambridge, 1955), F. R. Cowell's *Cicero and the Roman Republic* (London, 1948), and the third edition of A. Piganiol's *Histoire de Rome* (Paris, 1954); in addition, older works such as Mommsen's *History of Rome* (New York, 1894), the revised edition of Heitland's *The Roman Republic* (Cambridge, 1923), and, of course, the *Cambridge Ancient History*, are invaluable guides to the history of the period. Volumes 7-10 of the latter work contain full bibliographies of the period; Cowell's book, easily accessible in the Pelican series, contains an excellent select bibliography.

The adjudication of interest groups, however, is a delicate task of leadership which requires tact and finesse, sympathy and understanding. In this sense *humanitas* became an individual conception, for the men who were to carry out this task had to possess behavioral traits which, when exhibited in the arena of practical affairs, commanded the respect and allegiance of society. To borrow a phrase from an essay by Bruno Snell, the leaders of society had to combine the "humane with the humanistic;"¹⁰ they had to be skilled in dealing with individuals and classes and morally sound in rendering and implementing decisions.

It is in this important respect that Cicero envisioned the man of *humanitas* exerting influence. It must not be imagined that Cicero was delineating the characteristics of a mere dilettante or precisian of the cultured arts. Rather he urged as the ideal a cultured, humanitarian gentleman committed to the improvement of the human condition: "It is the part not only of a great man and one by nature temperate, but also of one educated in learning and liberal studies, to wield the great power he has in such a way that those under him want no other rule."¹¹

It is evident in the preceding that *humanitas* is an integral aspect of ethical theory: as a definition it is a normative statement of how men ought to behave. This means *humanitas* is closely allied with human nature, since for Cicero it is nature which excites desire and furnishes motives for moral conduct rather than considerations of duty imposing *a priori* categories of behavior on nature.¹² In Cicero's analysis, natural impulses and desires direct all creatures toward self-preservation and self-development; hence the end of all life is to live in accordance with nature by seeking the largest number of the most important things in accordance with nature. In regard to human nature there is a hierarchy of these objects, defined by man's unique position in the cosmos. For in addition to the physical qualities which he shares with other animals, man possesses the divine spiritual qualities of reason and speech (*ratio et oratio*), the ability to survey the course of his life and make suitable preparations for its conduct. Reason and speech, however, are functions of communal existence. Since the traditional virtues of prudence, courage, temperance, and justice make such existence possible, it follows that man is compelled by his very nature to seek virtuous activity above all other ends.¹³ Thus the impulse toward self-love and self-preservation, which means living in accordance with nature, for man means especially the development of prudence, justice, and the other virtues.

¹⁰ Bruno Snell, "The Discovery of *Humanitas*, and our attitude toward the Greeks," in *The Discovery of the Mind* (New York, 1960), pp. 246-63.

¹¹ *Q.F.*, I, i, 22.

¹² *de Fin.*, iv, 48.

¹³ *Ibid.*, ii, 33, 45, iv, 26-37, v, 25; *de Off.*, i, 11-12, 50; *de Nat. Deo.*, ii, 147.

The recognition of the primacy of the virtues in Cicero's analysis of human nature suggests the relation of *humanitas* to man's efforts to live in accordance with nature. For the virtues, while conditional for community, in another sense are self-evidently predicated on some form of communal existence; outside human community moral conceptions of justice, courage, temperance, and prudence are meaningless. Since these excellences are the principal objects of appetite for man—for they are most in accordance with human nature—it follows that the social instinct (*communitas*) is man's deepest instinctual feeling and the fundamental principle of human existence; all aspects of the human enterprise are ultimately justifiable in terms of the associations which exist between men.¹⁴

In several places *communitas* is linked with *humanitas* in the sense that the latter, encompassing the social and moral virtues, is a principal means of achieving community. In *de Legibus*, for example, *communitas*, as the basis of justice, is linked with *liberalitas*, *patriae caritas*, and *pietas*, and in *de Finibus* it is linked with *bonitas*, *benignitas* and *comitas*, all of which are embodied in the term *humanitas*. Again, in *de Officiis* there is an important section that describes the necessity of mutual helpfulness amongst men: the entire basis of civilization in Cicero's view is man helping his fellow man rather than fearing and harming him. Thus *humanitas* grows directly out of *communitas* and the man of *humanitas* recognizes that nothing is more sacred than the welfare of his fellow man.¹⁵

The realization that the man of *humanitas* is the man who lives in accordance with nature provides a first clue for determining the function of philosophical studies in education for *humanitas*. It is evident from the preceding analysis that the fulfillment of the human enterprise, living in accordance with nature, is contingent upon knowing one's own nature since it enables the individual to ascertain the appropriate objects of appetite. Man is not born with a completed knowledge of human nature, however; otherwise he would be incapable of error because he would be able to determine at once the highest objects of desire. Rather man only gradually comes to discern his true being, especially through some form of education. Hence education for *humanitas* entails leading the individual to progressively uncovering the essence of his nature; that is to say, a man must know himself, as expressed in the ancient Delphic motto, *gnothi seauton*: "We must penetrate into the nature of things and come to understand its requirements

¹⁴ This principle, basic to the entire Rhetorical and Humanist tradition in education, is reiterated throughout Cicero's works; for example, *de Off.*, i, 19, 69ff, 153-61, ii, 12-16, iii, 21ff; *de Inv.*, i, 2-3; *de Rep.*, i, 2; *de Ora.*, i, 32, ii, 64; *Pro Archia Poeta*, vi, 12; *de Fin.*, iii, 62-64, v, 65ff; *de Leg.*, i, 43; etc.

¹⁵ *de Leg.*, i, 43; *de Fin.*, v, 65; *de Off.*, i, 155, ii, 12-16. For other references on the link between *communitas* and *humanitas* see n. 13.

thoroughly, otherwise we cannot know ourselves. For the Pythian Apollo bids us learn to know ourselves, but the sole road to self-knowledge is to know our powers of body and mind, and to follow the path of life that gives us their full employment."¹⁶

In its first function then, philosophy serves to acquaint men with the human condition and the meaning of the human enterprise. It will teach, for example, that all living organisms aim at self-preservation, and that for man this means maintaining the health of the body and the soul, while placing the former in subservience to the latter. It will show that man is so constituted as to have a natural aptitude for justice, temperance, and courage, and that these virtues are rooted in the social union binding men together in a universal brotherhood. It will instruct men further that without wisdom or prudence, what the Greeks termed *phronesis*, there can be no recognition of the virtues, and that consequently prudence is the chief means of achieving meaningful human existence.¹⁷

Philosophy will teach the meaning of natural phenomena and their relation to human existence, for one can judge truly of things good and evil only within the comprehensive plan of the universe. It will also "impart a conception of the power of nature in fostering justice and maintaining friendship, nor can we understand piety towards the gods without unfolding nature's secrets." That is to say, philosophy will lead men to theology by opening their eyes to eternity and the vastness of the universe; it will demonstrate the ordered regularity and rationality of the universe, and by analogy with this law-like activity of nature it will exhibit the way that man, who is continuous with nature, must live under the rule of rational law. Furthermore, by comprehending the beauty and dignity of the universe, philosophy will acquaint men with the beauty and dignity of the moral sphere of human activity. Hence the study of natural phenomena will return ultimately to ethics: nature demands duty to the state and to one's fellow man.¹⁸

Nor is philosophy the only discipline that can impart a knowledge of human nature and the human condition. A man who aspires to know himself should study the history, laws, and traditions of societies of men, since these subjects, as well as literature and rhetoric, exhibit human behavior in all its manifestations. They will show, for example, that if men do not live together in justice and equanimity, misery and chaos will result, and they will illustrate how communal integrity is premised on a deep-seated feeling of belonging and patriotic sentiment.¹⁹

¹⁶ *de Fin.*, v, 41-44.

¹⁷ *Ibid.*, iv, 3-4, 16-18; *T. Dis.*, i, 64, ii, 31.

¹⁸ *de Fin.*, ii, 45-47, iii, 73; *T. Dis.*, iv, 37-38; *de Nat. Deo.*, ii, 1-60; *de Leg.*, iii, 2; *de Rep.*, i, 26ff.

¹⁹ Cf. *de Ora.*, i, 196-97.

But education for *humanitas*, knowing oneself, requires not only an acquaintance with the human condition; even more, it demands virtuous behavior. As Cicero expresses it in his discussion of the Delphic motto, the Pythian Apollo bids us not only to "know our powers of body and mind," but also to "follow the path of life that gives us their full employment" (see n. 16). In line with Socrates' equation of knowledge and virtue, Cicero insists that philosophical studies relate to *humanitas* by educating the good man.

The analysis of the nature of virtue appropriate to ascertaining the meaning of this relationship occurs in book iv of the *Tusculan Disputations*.²⁰ After discussing various disorders of the soul, Cicero draws an analogy between the diseases, sicknesses, and defects of the body and those of the soul. This is introduced by distinguishing between potentialities for behavior and their actualized manifestations, and Cicero makes it clear he is discussing the former.²¹

The cause of diseased and defective dispositions of the soul are traced to perversions of beliefs, in the case of defects specifically to discordant beliefs. Conversely, a healthy soul is one comprised of healthy dispositions, a condition in which its judgments and beliefs are in harmony. Discordant beliefs therefore effect vice, harmonious beliefs effect virtue. Furthermore, diseased and defective dispositions of the soul result from a contempt or disdain for reason, whereas healthy dispositions eventuate from a regard for reason. Hence "virtue is an equable and harmonious disposition of the soul . . . [and] there spring from it good inclinations, opinions, actions and all that makes right reason; though indeed virtue itself can best be summed up as right reason."²²

Virtue then is a number of dispositions which are systematically and continuously exhibited in human situations. Since virtue is also man's ultimate objective in the sense that the separate virtues comprise the chief objects of appetite for life in accordance with human nature, and since the man of *humanitas* is virtuous, it follows that the problem of the relationship between the studies outlined in *de Oratore* and education for *humanitas* is tantamount to ascertaining how philosophy, history, jurisprudence, literature, and rhetoric contribute to, produce, or effect virtuous dispositions.

Moreover, as evidenced in the previous quotation, virtue is perhaps "best summed up as right reason." When a man is denoted as virtuous, what we mean is that he is predisposed to exercising reason in moral situations. Hence

²⁰ *T. Dis.*, iv, 27ff.

²¹ Cicero uses *adfectio*, disposition, and *habitus*, habit, almost interchangeably. I translate both terms as disposition, although it should be understood I intend it to encompass the entire range of potentialities from proclivities and predispositions for behavior to established habit patterns.

²² *T. Dis.*, iv, 34.

moral education, education for virtuous behavior, is synonymous with developing right reason: education for *humanitas* is the development of habits of right reasoning. Set in these terms, the function of the subject areas outlined in *de Oratore* is to develop reason; and the question concerning the relationship between these subjects and *humanitas* constitutes inquiring as to how philosophy, history, and the other formal studies contribute to developing the reasoning powers of man.

These thoughts are important for our present concern since Gwynn's failure to specify the relation of *humanitas* and philosophy is a result of his failure to recognize that the relation is a matter of developing dispositions and not a matter of imparting storehouses of information.²³ Philosophical studies serve the latter utilitarian function precisely as Gwynn and other commentators suggest, *qua* educating an orator. But *qua* education for *humanitas*, these studies are concerned with developing abilities and skills rather than imparting cognitive repertoires.

While Cicero does not deal with the function of philosophical studies in developing virtuous dispositions in a systematic and methodical manner, there are nevertheless numerous places in his treatises, especially in his philosophical writings, where he broaches the question explicitly and in some depth. For convenience of analysis and explication I divide these discussions into two categories.

There are several places where Cicero argues that philosophy can be an incentive to virtue by furnishing precepts for action: In *de Officiis*, for example, he mentions that the rules for leading a consistent and moral life may be derived from philosophy; in the *Academica* he claims that philosophy should be pursued because it is "the guiding principle of life;" and in *de Natura Deorum* he refers to philosophical precepts as directive of practical affairs.²⁴ Philosophy is studied in order to discover the rules that should direct the life of the good man.

A similar argument appears in Cicero's defense of the citizenship of the poet Archias, where he claims that philosophical studies not only strengthen one's oratorical powers but they furnish moral lessons as well. Literature, history, and philosophy are specifically mentioned as abounding in incentives to virtuous deeds, in the sense that the noble images exhibited in the great writings of Greece and Rome command our respect and beg our emulation: "These noble pictures I have kept before my eyes throughout my career and they have guided my mind by meditating upon these patterns of excel-

²³ Gwynn, *op. cit.*, pp. 88-90.

²⁴ *de Off.*, iii, 5; *Aca.*, i, 7; *de Nat. Deo.*, i, 7. For related arguments see *de Rep.*, i, 23-26; *T. Dis.*, i, 70-79.

lence."²⁵ Philosophical studies aid in educating the good man by furnishing paradigms of moral excellence which may be emulated.

The claim that philosophy is an incentive to virtue is, of course, another aspect of what I identified earlier as the first function of philosophy as envisioned by Cicero in education for *humanitas*; in both instances he intends the study of philosophy to furnish rules of behavior and other sorts of cognitive information which will aid in the conduct of moral life. The first function of philosophy contributes to the development of virtuous dispositions as any other rules contribute to habit formation, namely, by furnishing criteria for behavior.

Modern thinkers might counter Cicero, however, by claiming that this function in no way ensures moral behavior since there is no necessary correlation between learning maxims and actually being a good man. We might contend, in other words, that in its preceptual functions philosophy is not a causal agent; the mere learning of criteria in no way guarantees that the individual will adhere to them.

While apparently true, this charge against Cicero's arguments is obviously contingent upon interposing a theory of volition and thus maintaining a breach between thought and action in the moral sphere, a breach traceable not to Cicero and classical philosophy but to the rise of Christian philosophy and especially to scholasticism. For Cicero, as well as for other ancient philosophers, there is no difference in kind between thought and action: cognition is continuous with activity rather than the latter a result of the former. This is stated in unequivocal terms in the opening passages of *de Republica*:

It is meaningless to have virtue as if it were a method or an art (*artem*) unless you manifest it. While some arts can remain in your power without using them simply by knowing (*scientia*) them, to have virtue means to use it [i.e. to possess virtue means to be virtuous].²⁶

The same point is made in Book III of *de Finibus*: wisdom (*sapientia*), which comprehends virtue, is compared to the arts of acting and dancing rather than seamanship and medicine, for "its purpose, being the exercise (*effectio*) of the art, is the art itself and not something outside it."²⁷ As Rackham comments in a note on this passage, *effectio* is to be taken in the sense of Aristotle's *praxis*, the exercise or doing of an art, rather than in the sense of *ergon*, the concrete product of an art.²⁸ This is borne out later in the same passage:

²⁵ *Pro Archia Poeta*, 14.

²⁶ *de Rep.*, i, 2.

²⁷ *de Fin.*, iii, 24.

²⁸ See the Loeb edition of *de Fin.*, p. 242, n.a. This contention is further justified by the fact that Cicero is the first Roman to use *effectio* to mean efficient cause in Aristotle's sense.

. . . in the other arts when we speak of an artistic performance, this quality must be considered as in a sense subsequent to and a result of the action . . . whereas in conduct, when we speak of an act as wise, the term is applied with complete correctness from the first inception of the act. For every action that the wise man initiates must necessarily be complete in all its parts at its inception, since the thing desirable is his activity. Whereas it is a sin to betray one's country, to use violence to one's parents, to rob a temple, where the offence lies in the result of the act, the passions of fear, grief, and lust are sins, even when no extraneous result ensues. The latter are sins not in their subsequent effects but immediately upon their inception; similarly, actions of virtue are to be adjudged from their inception and not in their successful completion.²⁹

Hence wisdom, as well as virtue, is to be understood in functional and dispositional terms, that is, as the act of doing something or its potentiality. Furthermore, in the *Tusculan Disputations* philosophy is identified as the study of wisdom, which also comprehends virtue.³⁰ In regard to the first function of philosophy in education for *humanitas*, therefore, while it is perfectly true that from the point of view of later thinkers the mere memorization of rules of conduct will not ensure moral behavior, from Cicero's point of view rules of moral behavior and their acquisition are integrally tied up with, and meaningless outside of, being a wise and virtuous man.

This thought might be identified as a second function of the study of philosophy in education for *humanitas*, although it must be understood that while it is perhaps a distinguishable feature for us, it is an integral aspect of philosophical studies in their entirety for Cicero.³¹ I will attempt to clarify this aspect or second function of philosophy by briefly analyzing several passages concerning the study of the liberal arts, logic, and natural philosophy. I limit the discussion to these three areas since it will become obvious in the sequel how the arguments apply to history and jurisprudence.

In Book I of *de Republica*, Laelius claims that the arts are "valuable only to exercise and, so to speak (*tamquam*), induce to activity (*inritent*) the mental abilities (*ingenia*) of the young, so they may find it easier to learn more important matters."³² The arts referred to are the quadrivial subjects, especially astronomy and mathematics, and the "more important matters" Laelius later identifies as affairs of state and social problems. Hence the quadrivium will contribute to moral education by sharpening the mental abilities and inducing one to mental activity in the realms of practical affairs.

²⁹ *Ibid.*, iii, 32; also see *de Leg.*, ii, 46-47; *de Off.*, i, 60; *Orator*, 143; *de Ora.*, i, 146; *Brutus*, 263.

³⁰ *T. Dis.*, i, 1.

³¹ Cf. M. L. Clarke, *The Roman Mind* (Cambridge, Mass., 1956), p. 136.

³² *de Rep.*, i, 30.

It will be noted that *inritent* is qualified by *tamquam*; thus the inducement of *ingenia* to activity is intended in a figurative sense. Furthermore, *ingenia*, when used in relation to man, has a functional connotation: they refer to natural dispositions and inclinations or modes of thinking. When Cicero claims that theoretical subjects induce mental activity which aids in practical affairs, therefore, he is arguing that the study of mathematics and astronomy, among other subjects, evoke patterns of thought that are useful when applied to political and social problems.

The argument is expanded in *de Oratore* to include all the liberal arts. In Book I Crassus claims that,

... no one should be numbered with the orators who is not accomplished in all the liberal arts, for while we do not directly exhibit these in orations, it is nevertheless evident whether we are strangers to them or have learned them. Just as ball-players do not in their game employ the physical dexterities practiced in the gymnasium, yet their movements show whether they have had such training or not . . . so with speeches in the courts, the assembly and the senate; granting that the other arts may not be especially brought into play, still it is easily discernible whether the speaker has merely floundered about in this declamatory business or whether, before approaching his task of oratory, he has been instructed in all the thinking arts [i.e. the liberal arts].³³

It is important to recognize the behavioral orientation of this passage: not only is an analogy suggested with physical exercise, but it is claimed that learning in the thinking arts is easily discernible in the behavioral characteristics of the orator, i.e. in his orations. It is evident, in other words, whether the orator is knowledgeable and whether he is reasonable in constructing and presenting arguments. Hence the thing developed by studying the liberal arts is the processes involved in appropriate thinking which are then transferable to all sorts of practical situations.

This sort of argument, that certain kinds of theoretical studies such as the quadrivium, develop man's reasoning powers was not, of course, original with Cicero. Indeed, it sets Cicero well within the philosophical tradition of educational thought, commencing with Socrates and Plato, which claimed that there is continuity between the practical judgments of men and their theoretical speculations; the same kinds of processes are involved in each and the man who excels in one will excel equally in the other. There is no difference between the pure knowledge-getting enterprise of the philosopher and the practical thinking of the good man; in Socrates' familiar phrase, knowledge is virtue, that is, the processes of attaining knowledge are the same as the processes of making virtuous judgments. For Cicero as well as Plato, there is no disjunction between the life of theorizing and the life of

³³ *de Ora.*, i, 72-73.

practicing. Philosophical studies contribute to educating the good man insofar as they impart modes of thinking or categories of thought which, manifest in moral situations, are denoted as virtuous.

The same idea is conveyed in Cicero's discussions of the study of logic and natural philosophy. In *de Finibus* logic is termed a virtue because it "conveys a method that guards us from giving assent to any falsehood or ever being deceived by specious probability, and enables us to retain and to defend the truths that we have learned about good and evil." Logic, in other words, develops moral behavior insofar as its very terms of discourse preserve truth and goodness. The point is made even more forcefully in an earlier passage, where logical inference (*collatione rationis*) is identified as the method by which the mind "ascends by inference from the things in accordance with nature till finally it arrives at the notion of the good."³⁴ The function of logic is to make discourse on moral questions; hence the terms of this discourse reflect moral categories of thought. As men learn and understand logic in the sense that they become logical and make logical discourse, therefore, so they become moral.

In regard to the study of natural philosophy, Cicero recalls the education of Pericles at the hands of the nature philosopher, Anaxagoras. He relates that Pericles was the first orator to profit from the habits engendered by abstruse mental exercises: the study of natural philosophy imparted grandeur and loftiness of mind to Pericles, so that when he turned from a "consideration of the heavens to human affairs, his thoughts were loftier and more magnificent." Also, in *de Republica* it is hinted that without studying natural philosophy men will remain ignorant of "many important matters," and in the *Academica* natural philosophy is said to fill us with a most humanizing (*humanissima*) kind of pleasure.³⁵ These thoughts are summarized in *de Finibus*:

... the study of the heavenly phenomena bestows a power of self-control that arises from the perception of the consummate restraint and order that obtain even among the gods; also loftiness of mind is inspired by contemplating the creations and actions of the gods, and justice by realizing the will, design and purpose of the ruler to whose nature we are told by philosophers that true reason and supreme law conform.³⁶

Natural philosophy was a moral study because the world was conceived in moral terms. Nature was, by definition and category, a moral entity; and to think about it meant to think in moral terms. Hence the study of natural philosophy would educate for virtue, not only by analogizing with nature as

³⁴ *de Fin.*, iii, 72, 33; cf. *Orator*, 16; *Brutus*, 209; *T. Dis.*, v. 68-72.

³⁵ *Brutus*, 44; *Orator*, 15, 119; *de Rep.*, i, 19; *Aca.*, ii, 128.

³⁶ *de Fin.*, iv, 11-12.

suggested in philosophy's first function, but also by setting the categories of thought for physical phenomena in moral terms.

In summary, it is clear that Cicero did not set *humanitas* as his educational objective and immediately forget it in the complexities of the technical education of orators. Rather he envisioned philosophical studies, including philosophy, history, law, and other subjects, contributing directly to humanizing man, not in the sense of filling man's mind with information and precepts, but in the sense that the true and complete comprehension of these subjects meant moral commitment. For Cicero, as well as for the ancients generally since the time of Socrates, the categories of thought involved in all philosophical discourse were moral categories; the process of comprehending, or better, *doing* philosophy—for philosophy in its most important sense was an *ars* (see n. 30)—necessitated thinking in moral terms which, in terms of the continuity between thought and action, meant being moral. Leading the moral life, therefore, was a matter of actualizing in human experience those dispositions which were equivalent to the categories of thought embedded in philosophy; hence philosophy educated the man of *humanitas*, the good man, by cultivating in him a moral *Weltanschauung* within the context of its discourse.

CORRECTIONS § In H.E.R. Spring, 1965, p. 186, addition to Table 1.

Search #	Attorney General's Opinions						Statutes Retrieved Only By			
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To the Editors

PHILOSOPHICAL MODELS OF TEACHING

To the Editors:

In his article, "Philosophical Models of Teaching" (HER, Spring 1965), Professor Israel Scheffler aims to discover, through a "dialectical" investigation of "three influential models of teaching," some elements of a "satisfactory conception of teaching." There are three points about his inquiry which need to be mentioned.

The first concerns Professor Scheffler's incorrect historical references. Professor Scheffler makes it quite plain at the outset that the "historical affiliations" which he cites for each teaching model are not necessarily accurate. Thus, the reader is properly fore-armed against the discrepancies which he is to find between the models as stated and the views of the various philosophers which are said to be associated with them. A close examination of Locke's *Essay* will reveal that Professor Scheffler's exposition of the "impressionist" model excludes several major aspects of Locke's thought on teaching and learning.

Hence, the allegation that this model is "peculiarly and narrowly cognitive" and, thereby, ignores moral matters and radical innovation does not fairly apply to Locke.¹ Also, a hard look at Plato's *Republic* will show that Professor Scheffler's presentation of the "insight" model disregards large portions of Plato's views on teaching and learning.²

¹ The passages of Locke's *Essay* which I have in mind are numerous. On moral matters, see (Dover publication [1959], A. C. Fraser's edition): Bk. I, ch. ii (a discussion of whether or not moral rules are innate); Bk. II, ch. xx (good and evil as modes of pleasure and pain, and some specific qualities of character); Bk. II, ch. xxi (error in moral judgment); Bk. II, ch. xxviii (kinds of moral rules); Bk. III, ch. ix (learning and teaching of moral words and their significations); Bk. IV, ch. iv (moral names and ideas); and Bk. IV, ch. xii (morality as the proper study of mankind). On innovation, see Bk. II, ch. xxiv (ideas of artificial things); Bk. II, ch. xxx (liberty of man's mind in constructing complex ideas; criteria for distinguishing between real and fantastical ideas); Bk. II, ch. xxxiii (association of ideas); and Bk. IV, chs. II & xvii (intuition).

² The portions of Plato's *Republic* which

Thus, the imputation that this model ignores moral matters and principles is irrelevant to Plato, if not Augustine.

One concedes Professor Scheffler the right to construct his models as he sees fit, but one is puzzled by his insistence upon the use of historical allusions even when they are incorrect. They are not essential to his argument; and, more important, they are misleading as to the position which he takes at the end. By associating Locke with the "impressionist" model and Plato with the "insight" model, both of which he finds faulty, Professor Scheffler gives the distinct impression that his position is different from that of Locke and of Plato in that it contains elements which theirs do not. Professor Scheffler holds that a satisfactory view of teaching must involve at least these elements: "the cumulative growth of knowledge in its *public* sense," "insight," and "general and impartial principles governing the assessment of reasons bearing on . . . [given] issues." And, by associating Locke and Plato respectively with the "impressionist" and "insight" models, each of which he finds to be lacking in some of the elements, he leads one to think, at least on first glance, that Locke's and Plato's

respective ideas on teaching and learning do not include all of the elements and, insofar, differ from his conclusion. The truth of the matter, of course, is that Locke and Plato do incorporate all three elements into their respective positions. It appears, then, that Professor Scheffler's position has a greater affinity to that of Locke and of Plato than he allows.

The second point concerns some of Professor's Scheffler's comments on public knowledge, insight, and rational principles. Public knowledge, the reader is told, is knowledge which has been ascertained as such by the employment of publicly accessible rational principles, which are found in the respective traditions of the various rational disciplines. Insight, the reader is informed, is important because it adds to public knowledge by confronting given public knowledge with "reality." Insight, however, is not held by Professor Scheffler to be beyond the pale of public evaluation. Any insight, to be genuine, must satisfy publicly available rational principles, which, as already mentioned, are located within the traditions of the rational disciplines. In other words, an adequate insight is "filtered through a

I have in mind are diffuse; they constitute, by and large, the second half of Bk. II onward through Bk. VII. A major aim of this part of *The Republic* is to show how a just state is to obtain its leaders, who, of course, are philosophers. The final formal training of prospective philosophers will be dialectic, the science of being, reality, or first principles (the last three or four pages of Bk. VI and, again, the finishing pages of Bk. VII). But before one can be ready to study dialectic, so Plato thinks, he must have undergone an extensive moral education (outlined in Bks. II-IV and the opening pages of Bk. VI) as well as training in the mathematical and natural sciences (the last two-thirds of Bk. VII). Plato's view of the learning and teaching

of "insight," which is to be had through dialectic, takes character education into account in that the former type of education presupposes the latter sort. Moreover, Plato's dictum that knowledge is virtue makes plain that moral and cognitive learning and teaching are inextricably intertwined. In the final pages of Bk. VI, where the metaphor of the divided line is discussed, Plato points out that "insights" had through dialectic are not beyond the scope of evaluation in view of publicly held principles. At least, he says that an alleged grasp of being, or reality, is genuine only insofar that it is abstract (i.e., devoid of references to material things), clear, and capable of running the gauntlet of all objections.

network of background principles." These views are interesting and suggestive, but they are also in need of clarification.

At times, when Professor Scheffler speaks of reality and tradition, he seems to regard the former as somehow independent of the latter. At other times, however, he appears to think that tradition is the measure of reality. For, when he posits that insight is man's means of grasping reality and that insight must be limited by principles engendered in tradition, he implies that reality, at least as far as man is concerned, is only what tradition permits man to know. Thus, Professor Scheffler should have further explicated the relation between reality and tradition: Is the former independent of the latter, or is it defined by the latter? If the first alternative is the case, then Professor Scheffler needs to explicate the relationship between reality and rational principles. It is not at all readily evident how principles arising within a tradition can be significant of a reality independent of that tradition and, therefore, how they can lead one to a "vision" of a reality beyond that tradition. If, however, Professor Scheffler means that reality is whatever tradition defines it as, he needs to explain more carefully than he does how his conception of teaching makes room for radical innovation on the part of students. For, according to this alternative, "new" insights into reality as well as given public knowledge must conform with principles born in tradition, a stipulation which indicates, seemingly, that all that can be taught and learned must agree with what is already known and, therefore, cannot be radically new.

The third point concerns Professor Scheffler's views on the reformulation of rational principles. In holding that the traditions of rational disciplines grow,

he presumably means, among other things, that the principles given within the traditions become revised. And in contending that teachers should be prepared to improve given rational principles whenever the need arises, he makes plain that such principles should be reconstructed on occasion. Unhappily, he fails, in both of these contexts, to indicate what principles should be employed to decide when, how, and to what end given rational principles, existing within traditions, are to be altered. Apparently, the desired principles cannot be whatever given principles are under criticism. Furthermore, it is not evident that they can be discovered by some vision of reality since they, according to Professor Scheffler's notion of insight, would have to cohere with the principles already in existence. Perhaps they are given principles other than those under scrutiny. If this is the case, which of the others ought to be employed? Not having explained which principles ought to be used to criticize given ones, Professor Scheffler does very little to help the teacher in the task of the reconstruction of given rational principles, a job which Professor Scheffler assigns to the teacher.

In sum, while Professor Scheffler's essay goes some way toward a satisfactory conception of teaching, it is impeded by historical oversight and philosophical difficulties.

ROBERT D. HESLEP
University of Georgia

PROFESSOR SCHEFFLER REPLIES:

I am grateful to Professor Heslep for his critical comments on my paper, and I should like here to respond briefly to his three main criticisms:

1. Charging me with "incorrect his-

torical references," Professor Heslep argues that the models I presented as being associated with Locke and Plato exclude large portions of their thought, which portions in fact undermine my critique of these models, at least with reference to the philosophers in question. Now, *that the models are attributable* to the said philosophers is apparently not disputed by Professor Heslep; his complaint is only that they are not descriptively *complete*. It seems to me, however, mistaken to equate such incompleteness with incorrectness. Without picturing everything a philosopher has said, a model may still correctly represent what he has said and, moreover, said memorably and distinctively with reference to certain topics.

Nor does the presumed fact that excluded portions conflict with my critique of the models seem to me to bear on the question of historical correctness: the issue concerns rather the correctness of my critique. And such critique is itself not thus undermined unless it is assumed that the excluded portions *properly* characterize the models in question, an assumption which is philosophical rather than historical. I know, for example, that Plato holds insight to underlie morality, and that Locke believes the processing of simple ideas to account for innovation, but I reject these views on independent grounds.

Rejections of this sort indicate that philosophers do not, after all, make up one happy family. If, as Professor Heslep says, "Locke and Plato . . . incorporate all three elements into their respective positions," there is a world of difference between them still. Nor, surely, do my own views need to contain different elements in order to conflict with the opinions of these eminent philosophers. There is room enough for disagreement on the interpretations

accorded the elements in question, as is made clear, I believe, in my paper.

2. Professor Heslep believes I am caught in a dilemma between tradition and innovation. On the one hand, I applaud innovation; on the other, I give serious place to tradition as mediating insight. He takes me, in fact, to be committed to conceiving tradition as "the measure of reality," since I hold insight into reality to be "limited by" tradition. But this inference is surely fallacious. It is simply illegitimate to transform my talk of insight as "filtered through a network of background principles" into such versions of Professor Heslep as: that insight "must conform with principles born in tradition," that "reality is whatever tradition defines it as," and "that all that can be taught and learned must agree with what is already known." Limitation, mediation, qualification by principles embodied in tradition are crucially different from definition, unique determination, and absolute conformity with the past. That scientific reasoning is limited by the canon of consistency does not imply that there can be no new scientific arguments; that insight and observation are constrained by systematic and methodological principles does not imply that they contribute nothing novel. I believe, in sum, that reality is independent of tradition, that tradition qualifies insight, *and* that insight contributes novelty.

3. Professor Heslep complains that I give very little help to the teacher in reconstructing rational principles. I certainly did not set forth my views on this difficult problem in the paper under consideration, although I have sketched them elsewhere.¹ My point here was a different, though still, I believe, an im-

¹ "On Justification and Commitment," *Journal of Philosophy*, 1954.

portant one: the recognition that our conceptual and methodological principles undergo motivated change, that the student of science, for example, needs not only a grasp of the factual corpus of his chosen domain, the willingness to strive for a personal perspective on it, and a mastery of its relevant methodology, but also a sense of its history and spirit, which is capable of freeing him from conceptual rigidity. To say this much is, I believe, educationally significant, even without an explicit philosophical analysis of rational change of principles, desirable though such an analysis may be.

ISRAEL SCHIEFFLER
Harvard University

MISSISSIPPI'S FREEDOM SCHOOLS

To the Editors:
I should like to take the opportunity presented by Florence Howe's article to discuss some implications of the freedom schools for American colleges. I want to emphasize first the defects of the freedom schools, not because I think they were failures—hardly—but because it seems to me that the defects were not built into the theory. Rather they came from the prior training of the teachers, from their ideas about education, and their notions of how to proceed. For as Jimmy Garrett, a SNCC worker now organizing freedom schools in the Los Angeles area, has pointed out, the teachers were too much bound to what the colleges had accustomed them: the notion that transmitting information is the primary function of the classroom. The teachers were bound, besides, to the inherent importance of that information as such. I can recall on more than one occasion at one or another freedom school sitting through a well-meant, and often well-

prepared, but for the students (and me) meaningless lecture on Negro history or the "power structure." Many teachers could not grasp the fact that one cannot pour in facts, even about something presumably as important as the history of the students' own people.

And their method of getting across facts taught more than the content. The method, despite the freedom school context, taught authoritarianism, as it does, I believe, in college. The method taught the mysterious importance of accumulating information, like well-stacked pennies. The method often prevented what was most needed, in freedom schools quite as in colleges—the free expression of what students feel. For all of us it was hard to get far enough away from texts and facts for the curriculum to become real, for both ourselves and the students. Only in a living context could the facts, the information we found so important, become knowledge ready for use. It was often only because of the capacities of the students themselves that the overwhelming authority of the teacher began to be broken down, that the informational, accumulative notions of learning were re-examined, that the need for emotions and real points of view in the classroom became clear. One began to see the limits of an educational theory which emphasizes sustaining and transmitting a tradition, in the face of one devoted to personal development and realization.

The primary virtue of the freedom schools for the northern teachers was that sooner or later they were challenged by the reality of new situations. As Florence Howe has shown, the freedom schools demanded, and thrived on, flexibility. The "classroom," for example, could "become" almost anywhere, and often almost at any time. The normally sharp distinctions, mostly perpet-

uated by colleges, between classroom and corridor, between learning and life, academy and community, dissolved. This dissolution did not, for many, represent a new educational idea; but for most, it was the first time they had consciously practiced it.

More important, many teachers for the first time watched young minds discovering what they did not know *in the context of having to know it*. It is obviously not unusual in a college to uncover ignorance. But so often that discovery is met with a combination of embarrassment and indifference, because remaining ignorant doesn't really matter for so many students except insofar as that becomes an awkward public fact. Grades aren't especially compelling any more and abstract information or methodology whose point is remote and lifeless isn't likely to produce real hunger. Certainly, ending ignorance in college is never a matter of life and death. But in Mississippi, it very nearly is; learning to understand one's own experience is no pleasant luxury, but the staff of life. Besides, the freedom school students so *enjoyed* ending the misunderstanding and ignorance they were not ashamed to admit. To anyone who confronted such a classroom, the game-like, comfortable indifference bred of college classrooms must become intolerable.

In a third way the freedom school classroom was part of life in a manner that the college classroom is not. Discussions at least some of the time could focus on the experience going on *in the class itself*. In college, political science courses seldom involve the political structure of a class, or even centrally the political positions held by the students and the real political forces to which, in and out of the college, *they* are subject; and a fetish of "objectivity" keeps professors from overt statements

about their own politics (though in fact their supposed "objectivity" itself reveals a true political position). Similarly, sociology classes seldom use the social structure of the class itself as focal point. Thus the locus of concern is outside the classroom, very often quite remote from it and the real lives students lead, though I suspect there is neither any very good reason for this disjunction, nor for believing that students can better understand politics or social structures by studying situations other than those in which they are involved. Science teachers, on the other hand, recognizing that the classroom experience needs to be real rather than merely theoretical and abstract, insisted upon laboratory work, which teaches by real experience (though it, too, can become patterned and remote).

So in the freedom schools the real lives of the students and their real experience in the classroom became central to their study. You asked questions about what might happen to, and *how* power would operate on, a student's father in Greenwood if he tried to register to vote, or if the student himself attended a freedom school, as in fact he was doing. You asked, how does what we do in freedom school here in Laurel differ from what happens in regular school, and why do these differences occur, and how does the difference make you feel? By thus concentrating on events as they actually occurred and feelings as they actually came out, the freedom schools did one of their main jobs: helped the students to recognize that the lives *they* actually led, the thoughts and feelings *they* actually had, had validity and importance, were worth studying and trying to understand. And here they probably differed most profoundly from colleges, in which the whole approach to knowledge, emphasizing as it does objective,

permanent "truth" and seeking to eliminate subjective, emotional responses, effectually denies—especially in the central intellectual experience of the classroom—the importance of the student himself. Freedom schools, to put it another way, endeavor above all to encourage individuals—students and teachers alike—to bring their time-bound, limited experience and their own peculiar emotions to bear in the group experience of the classroom; whereas colleges train students to depend upon those with presumably wider experience and to submerge emotion at all costs. In this way freedom schools aim at individual self-expression in the context of individual responsibility to the needs of the group—an educational ideal more truly democratic than that of colleges, where in most respects democracy stops at the admissions office, if it ever proceeded that far.

There are, then, profound lessons to be drawn from freedom schools, but it is hard to see how colleges, most of whose thinking on curriculum has been stifled by considerations of budget, market place, prestige, and tradition, can draw them.

PAUL LAUTER
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ARE OUR UNIVERSITIES SCHOOLS?

To the Editors:

Mr. Johnson thinks that thoughtful planning in higher education cannot occur because we do not distinguish between two types of institutions. One is the traditional university whose function is to maintain critically our intellectual tradition and to study questions arising from education within it. The other is a wholly new kind of publicly maintained institution for general and applied research, devoted to solving the

problems assigned to it by government, business, and other non-academic agencies. Because we have allowed the new institution to grow up within the university, undifferentiated from it, we have on our hands a number of problems in the university: the slanting of its program by big subsidies to the sciences, distortions in the productive scholarship of the faculty, lack of attention to good teaching, an emphasis on practicality and narrow specialization in the curriculum, an uprooted and frustrated student body, and the like.

The distinction, if I understand it correctly, relates fundamentally to two different functions that the university has historically been asked to fulfill. On the one hand, it has a distinctively educational responsibility in the sense that it is to maintain and extend the knowledge of our intellectual disciplines and traditions. On the other hand, the university is to be responsive to the demands of an increasingly complex and technological society, which is turning to the university for the talent and research facilities capable of managing the highly complex instrumentalities of our day and of solving problems produced or opened up by them. The proposal would assign these two functions to different institutions. Since the university is now very busy solving the practical and technical problems given to it by outside agencies, it no longer provides students with a critically maintained intellectual tradition but with an apprenticeship in practical research productivity. The establishment of public centers for research and development, separate from, but interactive with, educational institutions, would enable us to apply appropriate criteria to each type of institution and to avoid the confusions presently encountered.

Although one can agree that in part colleges and universities are defaulting

their educational responsibilities, this leap ahead to cut the gordian knot tying "project" or "mission-oriented" research to the university's traditional educational functions needs to be related to a fuller set of considerations. Among these is further attention to the government's impact upon higher education.

It is clear that research grant programs of federal agencies have contributed to an imbalance in the universities by supporting selected aspects of the university's resources. The programs of the National Institutes of Health, to use one of Mr. Johnson's examples, have been granted without consideration of the inclusive educational responsibilities of the colleges and universities. Presumably, this encouragement of extended research in the life sciences resulted from public and Congressional pressures to move ahead effectively in fighting disease. This concern with a particular aspect of human welfare contributed to an imbalance between areas of advanced study. It was not weighed in terms of its total consequences for the university. The universities as well as the federal government need to come to grips with this selective emphasis in using the resources of the university.

Yet additional considerations indicate that the national government's interest in higher education is not merely to use the universities to serve the purposes of federal agencies. The National Science Foundation was authorized to initiate and support research and education in the broader ranges of science and to encourage basic, as distinct from project, research. Although governmental agencies do buy the services of the university to carry out agency purposes, about half of federal funds are designed to support basic rather than mission-oriented research. The

National Science Foundation provides a small percentage of the institution's research grants for the university to do as it will in strengthening its resources. Thus, some institutional control over its total scientific research program is subsidized by federal money.

Moreover, the recent report of the National Humanities Foundation indicates that increasingly the humanities will receive federal support, compensating, as it were, for the earlier support of science by the National Science Foundation.

In short, the interest of the federal government has not been merely to pose problems for the universities to solve, but also to strengthen the fundamental intellectual resources of the university.

It might also be noted that a considerable part of federal government contract research money has for a number of years been spent in research centers operated by universities but separate from them. We have had some experience with a separation of project research from other university functions. However, we do not have evidence that this separation of institutional forms has produced the consequences Mr. Johnson wants for higher education generally. Presumably, it is one thing to "separate," in some sense, institutions; another, to sway the interests of instructors in these institutions toward a fundamental concern with the total functions of higher education. Institutions are manned by people, and it is difficult to see how a separation of institutions, despite a hope for "an intelligent and fruitful integration," would produce the desired integration in the higher learning.

Furthermore, some who pursue highly specialized research activities are very much concerned with the social and educational consequences of their work in specialized fields. Mr. Johnson's

proposal ignores those atomic scientists, geneticists, and others who explore and interpret the meaning of their research for human and educational values. It may well be that it is the way the researcher sees and approaches his field in relation to others that leads to the integration of knowledge rather than the type of institution within which his work is located. An institutional separation of the kind suggested would tend to inhibit and cut off the interaction and shared concern between research and social and educational policy now going on in many instances.

In addition to these considerations the proposal seems to entail a controlling presupposition. Essentially it is that the traditional function of the higher learning in providing a meaningful liberal education should be preserved in pure form by insulating it from contamination with the problems of a complex and corporate society and efforts to solve them. It is one thing to urge that the college or university be organized so that it gives concerted attention to its educational functions. It is another to urge that it be so organized that its resources for recognizing and solving problems are removed from its traditional academic functions. It is doubtful that the education of the liberal mind would be rejuvenated by assigning it to institutions with only an incidental and peripheral contact with modern problems and research facilities for dealing with them.

Furthermore, the view that education is properly distinct from research suggests a host of questions about what is meant by "education" and by "research." However, the exploration of these matters would take one far beyond the limits of this correspondence.

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TEACHING, ACTING, AND BEHAVING

To the Editor:

The idea that a conception of teaching might be developed which would be grounded in an adequate theory of human action is as tantalizing as it is elusive. Any attempt in this direction should receive our most careful attention. We have just such an attempt in Professor Thomas F. Green's recent paper, "Teaching, Acting, and Behaving" (HER, Fall, 1964). He writes as follows:

... the contrast between conforming to a rule and obeying a rule is the central distinction in a possible contrast between behaving and acting. This contrast between conformity to rule and obedience to rule lies also at the heart of what we mean by teaching. For teaching is a rule-guided activity, or as I shall say, it is norm-regarding. (p. 508)

Professor Green tells us that teaching is an instance of human action aimed at enhancing the human capacity for action. He then turns to exhibiting the differences between acquiring a habit and learning to obey a rule. But there is some difficulty in saying what needs to be said. It would be natural to say that action is behavior which is rule-regarding, that is, either rule-obeying or rule-creating. Green, however, has already pre-empted the term 'behavior' for use on the other side of the fence as that which is rule-conforming or simply habitual. So action is rule-regarding, and behavior is rule-conforming. But on this formulation it is at least confusing to say that action is behavior that is rule-regarding. It would be even worse to say that behavior is action which is rule-obeying or rule-creating. What we need is a term that will refer to what may be, given

the above usage, either action or behavior. All of the standard general terms that come to mind, such as activity, movement, or doings, are unsatisfactory because they fall so easily on one side of the dichotomy or the other. We surely need better terms. Let us make do with a neologism. We will use the term "beaction" to refer to the data which may be interpreted as action or behavior. Thus, action is rule-regarding beaction; behavior is rule-conforming beaction. (This will get worse before it gets better.)

The characteristics of beaction, which Green would stress in connection with teaching, are summarized under the notion that it is rule-regarding. This is to say that it is patterned or structured in some way and that the pattern may be characterized as correct or incorrect. The rules supply the basis for this characterization and the beactor acts relative to the constrictions which the rules enstate.

The paradigm of Green's actor is the beactor who not only beacts in accordance with a rule: he can state the rule, alter his beaction with reference to a rule, recognize instances of correct and incorrect beaction by himself or others. He can also criticize the rule and even alter it to fit new cases or create new rules. All this is to say that the paradigm is an intelligent human being—in contrast, for example, with the kind of phenomena studied by physicists, chemists, and other 'physical' scientists. The only thing that these latter phenomena have in common with the paradigm is that they are patterned or structured. Light waves don't "follow" the rules or the physical laws which govern them. These phenomena are neither intelligent nor unintelligent, although they are, of course, intelligible.

But Green does not deal with physical phenomena. The task he sets for

himself is a much harder one. He means to identify beactions which appear to be actions, but are not. That is, he seeks beactions which may be patterned and describable in terms of rules, but wherein the beactor is entirely oblivious of these rules and of the fact that his beactions might be reported as correct or incorrect by reference to the rules. Such beactions Green calls "behavior"; they are rule-conforming, but not rule-obedient. We would suggest that what Green calls behavior, that is, rule-conforming beaction, is a kind of low-level action. If this is so, we need deal with only one fundamental category rather than two and we can dispense with the term "beaction."

Consider what is said about acquiring a habit, and learning to obey a rule. To acquire a habit is to acquire a disposition to act in a certain way. The same may be said of learning to obey a rule of action. It too, involves a disposition to action in a certain way. How then does acquiring a habit differ from learning to obey a rule? . . . A rule of action is intended to discriminate between a right and a wrong, a correct or incorrect way of doing things. To learn to obey a rule is not simply to acquire a disposition to act in a certain way, but a disposition to act in that way *because* it is a correct way. (p. 509)

Green stresses the "capacity to distinguish between correct and incorrect performances." We must ask as to what would be acceptable as evidence of such a capacity, which he calls the critical capacity. Green uses the example of one who had learned to skate. He imagines someone who had learned to skate correctly (that is, acquired all the appropriate dispositions), but who could not distinguish between correct and incorrect, good and bad performances. Such

a person, he says, would have acquired the habit of good skating, but would not have learned the principles of skating. But if someone really does skate well, is it likely that he would not identify instances of failure to conform to his habits? Green does not require that the skater give a detailed account of his deviant moves, or that he be able to instruct someone else as to how to improve his skating. Green does require that the skater recognize the deviance as incorrect or bad. But in what does such recognition consist? In *saying* that it is correct or bad? Surely one can say the right thing at the right time without having the kind of recognition called for here. Perhaps returning to the correct way would be better evidence of recognition of the deviance as incorrect or bad, but it would not be conclusive for Green. For this "act of correcting" might only be a falling back into the old rut, no matter if the rut were the "correct" one. In fact it is hard to know what would serve to make clear whether one had an instance of obedience to a rule as opposed to an acquired habit.

A way out of this dilemma would be to admit that there is no clear line that can be drawn between acting and behaving. And this seems to me to be the correct view. We recognize a range of phenomena running from the simplest of habits to the extremely complex habit which includes the sophisticated capacity to analyze and criticize itself. Similarly we may speak of low-level rule-obedience and increasingly higher levels of rule-obedience. Thus behavior and action may be said to refer to the same phenomena and need not be put in competition with one another. There is certainly no need to try to divide the world between them.

Green seeks a characterization of teaching that is informed by, and ren-

dered in terms of, an adequate theory of action. He recognizes that action is purposive, and that norms or values play a central role. He further recognizes that action is patterned or structured, and that humans are capable of changing the patterns and initiating new ones. Behavior, by contrast, is that which is blind and "value-neutral-reiterative" rather than responsive and originaive. Thus in the dramatic finale of Green's paper we read that action is

... forever dangerous, like love and forgiveness, unpredictable, breaking to pieces the limits of the familiar and creating, in effect, a new beginning. Behavior corresponds to the fact that men live in proximity to each other; action corresponds to the fact that men in order to be human must emerge always into history. It is thus that they witness to the fact that they are men, that unlike the insects their destiny is not merely to labor upon it and appropriate it for themselves. It is in action that men show forth the fact that to be a man is to be a creature of history, the speaker of words and the doer of deeds. (p. 523-524)

It appears that Green, in his concern with celebrating certain human qualities, has confused the literal and the literary ways in which action may be discussed. And this leads him to an inadequate theory of action—one that only encompasses highly intelligent and creative action. Surely this is not enough for teaching purposes: as a generic category of use to teachers, action must include the least and the most intelligent, the least and the most responsive, the most groping as well as the most purposive.

We noted earlier that Green sees teaching as an instance of human action aimed at enhancing the human capacity for action. But a theory of human

action can never, by itself, yield such a conception. It is hard to imagine an adequate theory of action, or an adequate theory of teaching, that did not take account of the normative and purposive qualities of action. But to say that action is rule- or norm-regarding is not to say that a teacher is or should be always increasing the student's capacity to obey or create rules. The claim that teaching aims at *enhancing* the human capacity for action, considered as a statement of fact, is clearly false. Considered as a definition it suffers from the fact that too many teachers could no longer be called teachers. As a claim as to what teaching ought to be, and a lead to what teachers ought to try to do, it can be read as encouraging the development of more intelligent activity. Apart from the fact that other aims should also have a hearing, such a proposal has our full assent. But the promise of a theory of teaching informed by a theory of action remains unfulfilled.

Wherein lies the difficulty? One difficulty might stem from the fact that rules have a normative status. It is in terms of rules that we may report that something is correct or incorrect. But Green is fully aware that questions about the value of a rule are quite distinct from the questions about what would constitute correct or incorrect moves in accordance with a rule. (p. 509) He is also clear that he is not using *action* as an ethical category. For he writes:

History fairly shrieks its proof that men are capable of commitment to all manner of things. They may shape new loyalties less civilizing than the old. They may shape a loyalty and take such action as will prevent future men from ever acting again. They may give their life for a mess of pottage. But it has not been held that action is what makes men good,

only that it is what makes them human and historical. (pp. 522-523)

We have here no simple confusion of descriptive and normative dimensions as regards action. Still the idea that teaching aims at enhancing the capacity for human action certainly appears to involve a judgment of value, a judgment of what is good. Green might respond that all that is being proposed is that teaching commit itself to what is distinctively human. What is not at all clear, however, is how it would be possible for human beings, even as teachers, to do otherwise. The crux of the question turns on the criteria for an adequate theory of action. We would suggest that, given an adequate theory of action, the notion of enhancing the capacity for action would have to be spelled out in specific value terms. Put otherwise, given such a theory, a value-neutral notion of *enhancing* would be impossible. It is only possible, or better, plausible, on Green's formulation, because he has not satisfactorily encompassed the field of action in his theory of action.

But why does Green get himself into such a position? This is a much harder question to answer. There is evidence, however, that Green really does want to celebrate the fact of human action. One need not argue. One can heartily agree. But, unfortunately, there is no place for such celebrating *within* an adequate theory of action. This is apparent as one recognizes, for example, that there is no place for celebrating the fact of learning within the framework of a satisfactory theory of learning. To deny this would be to open the theoretical doors to every mode of celebration or valuation. In these terms, what would be the grounds on which one could deny a claim that teaching aims at enhancing the human capacity to behave, that is,

in Green's language, to conform to rules?

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THE COMPUTER AND INFORMATION RETRIEVAL

To the Editors:

Presumably because of my research interest in automated information storage and retrieval, I was invited to comment on the paper by Asher and Kurfeerst (HER, Spring, 1965) on *The Computer and Information Retrieval*. Commenting is a pleasant task, for this is a well written and informative article stating that computers provide the means of coping with "the staggering accumulation of knowledge," and that, "through the techniques of information retrieval the computer organizes, sorts, and locates verbal material."

The case study by which the authors chose to illustrate the application of an information storage and retrieval system concerned school law. This choice was not entirely fortuitous for at the University of Pittsburgh Professors Horthy and Kehl have devised techniques for automating the retrieval of legal data. As a result, information retrieval programs applicable to legal searches exist, and the Pennsylvania statutes have been transcribed into digital code for computer processing.

The retrieval experiment conducted by Professors Asher and Kurfeerst was

well designed and executed. Unfortunately, data concerning search questions based on the Attorney General's opinions were inadvertently omitted from Table I.¹ This additional data was supplied by the authors and is included in these comments.

The omission is unfortunate for it creates difficulty in understanding the authors' summary figures; however, it does not detract from their general conclusions.

In commenting on this article, I find myself in a somewhat unusual situation. Normally my role is that of a researcher advocating the all-out use of computers for information retrieval. Now, I have been placed in the position of an evaluator, and I must counsel caution in extrapolating the results of this study.

As the authors state, and this is a point that I would like to emphasize, legal material is particularly well adapted for electronic storage and retrieval because statutes are framed in a formal manner and are by intention concise and unambiguous. One would, therefore, expect to be quite successful in retrieving the relevant statutory references to legal questions, and even in retrieving more references than a skilled attorney could do manually. The attorney, in making his search, must depend upon a man-made index, whereas the computer searches for key words throughout the entire text. However, not all of the advantages are on the side of the computer, and if one is to do a suc-

¹ Addendum to Table I

Attorney General's Opinions

Search #	Statutes						Statutes Retrieved Only By	
	Machine			Manual			Machine	
	A	B	C	A	B	C	A	B
83	2	—	24	1	—	1	1	0
182	12	2	18	9	—	1	8	2

cessful search, he must also understand the limitations of the machine. One such limitation is that the computer will only find exact equivalents. Therefore, in addition to specifying the desired search term, (as illustrated in Fig. 1, P. 182, HER, Spring, 1965) the searcher must input all variations of the term including possible misspellings which crept into the machine-coded version of the statutes and various other "searchonyms" such as "secondary school" for high school. During a manual search these variations are sensed intuitively and cause no trouble.

The results of the experiment clearly indicate that the computer can be used effectively to retrieve statutes relevant to questions of school law. More specifically the experiment revealed that, "The machine search located 130 'A' or crucial documents, which the attorney's hand-search failed to find." In the course of the search the computer retrieved 264 nonrelevant statutes, but apparently these could be discarded quickly by inspection and caused no serious problem.

The authors imply that the more relevant material found, the better the retrieval response. I suggest that this implication be questioned—not necessarily rejected, but at least questioned. Granted that the machine retrieved 130 relevant documents that the attorney failed to retrieve manually, the crucial issue is whether or not the attorney was handicapped in answering questions by not having these documents. If he was able to adequately answer the questions on the basis of the information found by a manual search, then the additional documents uncovered by the machine search were of no practical value. What I am suggesting is that these 130 statutes, while relevant, may be redundant. No information is given on this score.

There are a number of other questions that could be raised by the procedures used in the experiment, but which were not answered by the data. These are:

1. Was there a difference in the computer's ability to retrieve statutes as compared with Attorney General's opinions?

2. Was there a difference in the effectiveness of KWIC-type searchers and of standard searchers?

3. Was there a difference in the relevance of the retrieved material to the questions asked by the state and university personnel on the one hand and the school district personnel on the other hand? I raise this question because the authors report (last line on page 183 and top of 184) that, "The statutes and Attorney General's opinions adequately answer questions posed by state and university personnel. The questions posed by school districts on the other hand often involve court opinions and matters of interpretation."

These are questions which I feel should be answered, and hopefully Professors Asher and Kurfeerst will have an opportunity to answer them.

The comments which I have made are not intended to detract from the importance of the experiment which these investigators have performed. Indeed, had the experiment not been a good one there would have been no point to these comments. Considerable care and caution must be exercised in interpreting the results of experiments on automated information storage and retrieval. If research is to make a contribution to the solution of these information problems, we must study both the strengths and weaknesses of our techniques.

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SELF UNDERSTANDING AND GUIDANCE

To the Editors:

In his article on "The School and Self-Understanding," Samler (HER, Winter, 1965) speaks of having children write about themselves while studying about values and mental health. I had an interesting experience with this article.

"Imagine Samler wanting to put all the children in the country, from grades 7 to 12, doing paper work like VA counselors writing up cases!" was my first reaction to what he had to say. I immediately began to make preparations to write an exposé letter to the editor of the HER.

Just as I was about to start to write, the telephone rang. The delightful female voice of the department secretary informed me that a fellow-worker was ill and unable to meet his class. Would I take his place? Naturally, I agreed to go at once and act as a substitute.

It was a class in "Techniques of Guidance in the Secondary School." I brought my copy of HER and put the case to them. I told them what Samler had to say. They then pressured me with questions and I retreated to reading directly from the article.

Their first reaction was to laugh, especially when I came to the part about dream interpretation. Yet, they became very serious about the question of privacy. No doubt, Samler had anticipated this objection and had dealt well with the issue. They still thought that one could not have children writing up all the content of their folders. The parents, some felt, would object.

It was difficult to answer their pointed questions about the practical aspects of this type of program. The idea of having ten or twelve students to each teacher was first received with coolness. One member of the class, however,

spoke up in favor of Samler's position about being optimistic, since we do get used to all sorts of new things these days.

The idea of having teachers and students working so much on mental health matters seemed to bother some of them. One student in the class thought teachers would not want this kind of employment. Another student insisted that he surely must have meant that this would happen in "special classes" taught by "specialists." Another said that she would not want her children to think they were qualified to analyze people. There was some feeling that children would be unable to cope with such difficult subject matter. As the class was disbanding, one student expressed the view that even qualified counselors have a difficult enough time trying to interpret information pertaining to personality; therefore, one could not expect children to do it successfully.

Whatever the value of Samler's suggestions to be found in this article, it provided to be an exceedingly good source of ideas for a class discussion in a course in Techniques of Guidance in the Secondary School. It was worth writing and publishing for this use alone.

I am glad that I had the opportunity to try Samler's article out on the Techniques of Guidance Class. I might, otherwise, have continued where I left off in my article entitled, "An Example of Quality Control in Higher Education," (*AAUP Bull.*, Fall, 1958). If I had, this would have been a very different letter. Imagine what a strong central government could do with such records!

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Book Reviews

HOW CHILDREN FAIL.
by John Holt.

New York: Pitman, 1964. 181 pp.
\$4.50.

Here is a book in the genre and the tradition of Rousseau's *Emile*, Pestalozzi's *Evening Hour of a Hermit*, Dewey's *My Pedagogic Creed*, and Neill's *Summerhill*. It is the personal testament of John Holt, based upon his intuitions and observations as a result of teaching, watching others teach, and (most important of all) watching others being taught, in the Colorado Rocky Mountain School, the Lesley-Ellis School, and elsewhere. Because it is personal, intuitive, subjective, and based on faith, it is going to annoy a lot of people—just as have the other books mentioned. It may not succeed in annoying as many people as have these more famous works, because it may not be as widely read. But this, in my opinion, will be a pity. For it is full of insights from which anyone with responsibility for the upbringing of a

child can profit, and it is grounded in a faith in the ultimately healthy impulses of children that we sorely need in this era of conservative reaction.

Holt is concerned about the penalties of failure in a success-oriented culture. He is concerned with those who fail in an obvious sense—by dropping out of school or college. He is also concerned with those who fail in fact if not nominally: they pass only because we decide to push them through the grades even though they know nothing. But, above all, he is concerned with another kind of failure, which afflicts almost all children: "they fail to develop more than a tiny part of the tremendous capacity for learning, understanding, and creating with which they were born and of which they made full use during the first two or three years of their lives."

The book is in the form of a number of memos, written in the evening after teaching or observing during the day, over a period of about three years. A small number of these memos have

been selected, edited, and rearranged under four topics: Strategy; Fear and Failure; Real Learning; and How Schools Fail.

In the section on Strategy, Holt describes the ways in which children try to meet or dodge the demands that adults make on them in school. He gives some rather horrifying, but convincing, examples of the way children concentrate on safety and avoid risk in the classroom, and of the way teachers reinforce this sad practice. For children, he suggests, the central business of school is not learning but getting their imposed tasks done, or at least out of the way, with a minimum of effort and unpleasantness. They don't particularly care how each task is disposed of: "If they can get it out of the way by doing it, they will do it; if experience has taught them that this does not work very well, they will turn to other means, illegitimate means, that wholly defeat whatever purpose the taskgiver may have had in mind."

Schools and teachers abet this process by focusing predominantly on *right answers*. Holt gives examples that show how teachers are so obsessed with the "right answer" hidden in their minds that they are unable to hear or understand what children are really saying and thinking. Schools give every encouragement to what Holt calls "producers" (students who are interested only in getting right answers and who make uncritical use of rules and formulae to get them) and discourage "thinkers" (students who try to think about the meaning of the problem under examination). Hence, children become not learners but strategists whose aim is to "beat the system." As a result of this miseducation, in which "right answers" are the only ones that pay off, children fail to learn how to learn from mistakes. For example, Holt

recounts that, in playing Twenty Questions with them (guessing a number between 1 and 10,000), if they say, "Is the number between 5,000 and 10,000?" and he says "yes," they cheer; if he says "no," they groan, even though they obtain the same amount of information in each case. The more anxious ones will repeatedly ask questions that have already been affirmatively answered, just for the satisfaction of hearing a "yes."

In the second section of his book, Holt deals with the interaction in children of fear and failure and the effect of this on strategy and learning. He found that even in a school that is considered progressive, which does its best not to put pressure on children or make them feel they are in some kind of race, the children are scared: scared of failing, of being kept back, of being called stupid, of feeling themselves stupid. And so, many children paradoxically take sanctuary in incompetence. Not only does demonstrated incompetence reduce what others expect and demand of the child, but it also reduces what he expects from or even hopes for himself. When one sets out to fail he is less liable to be disappointed. As Holt reminds us, you can't fall out of bed when you sleep on the floor.

Children are so afraid of failure, he thinks, because they have been taught to value success too highly and become too dependent upon it. He suggests that we praise children too much for good work. For if we make a child feel "good" when he does good work, might we not unwittingly be making him feel "bad" when he does bad work? A child does not need to be told he has done well when he accomplishes something. In fact, Holt suggests, when we praise him we are "horning in on his accomplishment, stealing a little of his glory, edging our way into the limelight,

praising ourselves for having helped to turn out such a smart child."

What children need, he maintains, is the experience of doing something really well—so well that they know, without having to be told, that they have done it well. Instead, we trap them inside a box of failure and fear: we make them afraid, consciously and deliberately, in order more easily to control their behavior and make them docile to our wishes.

In the part on Real Learning, Holt discusses the difference between what children appear to know and what they really know. In distinguishing between the two, he suggests that a child who has really learned something can use it and does use it. "It is connected with reality in his mind, therefore he can make other connections between it and reality when the chance comes." Unreal learning, by contrast, "has no hooks in it; it can't be attached to anything, it is of no use to the learner."

Needless to say, Holt thinks that schools are encouraging unreal or phony learning and inhibiting the acquisition of real learning. His views contain many echoes of Rousseau. For example: "Our teaching is too full of words, and they come too soon. . . . The essential is that this sort of process not be rushed. . . . Our aim must be to build soundly, and if this means that we must build more slowly, so be it." He draws many examples from his teaching of arithmetic, and he insists that knowledge not discovered by the children themselves will almost certainly prove useless and be soon forgotten. Teachers must stop demanding that students solve problems *the way or the best way*, he maintains. Children who are allowed to work through problems in their own way, at their own pace, can work without fear. Moreover, they can devise methods from which they

can really learn, because they are their *own* methods. We have to learn to recognize that the primitive, crude discovery of one child is just as important and as worthy of encouragement as the more sophisticated discovery of a more advanced student. In other words, says Holt, "the invention of the wheel was as big a step forward as the invention of the airplane. . . . We teachers will have to learn when our students are, mathematically speaking, inventing wheels and when they are inventing airplanes; and we will have to learn to be as genuinely excited and pleased by wheel inventors as by airplane inventors. *Above all, we will have to avoid the difficult temptation of showing slow students the wheel so that they may more quickly get to work on airplanes.*" (my italics)

In the section on How Schools Fail, the author analyzes the ways in which schools foster unfortunate strategies, increase children's fears, and foster learning that is fragmentary, distorted, and short-lived. He takes the opportunity to indict the test-examination-marks business as an enormous hoax, "the purpose of which is to enable students, teachers, and schools to take part in a joint pretense that the students know everything they are supposed to know, when in fact they know only a small part of it—if any at all." The "Tell-'em-and-test-'em" way of teaching, he claims, leaves most students confused, aware that their academic success is based on shaky foundations, and convinced that school is a place where they follow meaningless procedures to obtain meaningless answers to meaningless questions. School, in other words, is a place where children learn to be stupid. Since school is a kind of jail, children escape the relentless pressure of their jailers by withdrawing the most intelligent and creative parts of their

minds from the scene: they have other and more important uses for their intelligence.

The other major sin of the school besides the inculcation of fear is the imposition of boredom. Boredom, like fear, makes children stupid. Holt is hesitant (thank goodness) about classifying some children as intelligent and some as unintelligent. He thinks a child is intelligent when the reality before him arouses in him a high degree of attention, interest, concentration, involvement—that is, when he cares deeply about what he is doing. We should therefore try to make school as interesting and exciting as possible, not just so that it will be a pleasant place, but so that students will get into the habit of acting intelligently.

The school, Holt maintains, is a dishonest as well as a frightening and boring place. In our textbooks we present the children with a false and distorted picture of the world. We think it our right and duty to tell them not the truth but whatever will serve our cause—that is, the cause of making them grow up to be the kind of people we want them to be. We lie for the "good" of the children: or sometimes we lie just for our own convenience. We are, moreover, dishonest about our feelings, and we won't let the children be honest with us: they have to think and feel and say the appropriate things.

Instead of all this, instead of forcing phony learning into scared, uninterested children, Holt thinks we should be trying to turn out people who love learning so much and learn so well that they will retain the ability to learn in the future whatever needs to be learned. We are frightened of wasting time. We should have more faith in the autonomous powers of the child. We should have schools and classrooms in which each child in his

own way can satisfy his curiosity, develop his talents, pursue his interests, and gain from adults and other children a glimpse of the great variety and richness of life.

I am reluctant to criticize a book like this—although there are many who will, for it will provoke much opposition. It seems to me to have a personal validity that disarms criticism. There are, of course, lots of questions that one could ask Mr. Holt. For example, he says nothing about community: his is a plea for the development of autonomous individuals. And hence it is potentially liable to some of the criticisms that have been made of the individualistic excesses of some manifestations of progressive education. Again, there is the problem that appreciation of education often *follows* education. Hence, there is at least a *prima facie* case to be made for an element of compulsion in education—especially to introduce the richness of the world to those whose home backgrounds would not lead them to suspect it. Thirdly, he does not explicitly recognize the power of an objective element in education to provide a discipline and an authority against which the growing child can toughen and measure himself.

But I have no doubt that the author has thought of these and other difficulties that occur to me. He might argue, for example, in response to my first criticism, that our present educational approach does not appear to be achieving much in the way of developing a spirit of community, either, and that a genuine community can be composed only of autonomous individuals, never by frightened, bored, organization men who are sophisticated in the strategy of getting ahead. This is a short book, and the author seems more concerned to start us thinking than to present a comprehensive treatment.

Specific reservations are not immediately important. What is important is that this personal statement, a distillation of a sensitive person's observation and reflection, has an integrity that allows it to stand as it is. To indulge in carping criticisms would be to commit the very faults the author is indicting. It is a book to be read, reflected upon, and responded to in action.

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THE STRUCTURE OF LANGUAGE:
READINGS IN THE PHILOSOPHY OF
LANGUAGE.

Edited by Jerry A. Fodor and
Jerrold J. Katz.

Englewood Cliffs, New Jersey: Prentice
Hall, 1964. 612 pp. \$10.00.

Owing to the central importance of language as a carrier of communication the current revolution in the science of linguistics has caused repercussions and provoked interest in a variety of fields. The key term "linguistic transformation" occurs, with increasing frequency, in manuals of information retrieval and mechanical translation, in discussions on language learning, in descriptions of style and poetic media, and, not surprisingly given the linguistic orientation of contemporary philosophy, in philosophical arguments. Nevertheless, the documents representing the origin and growth of transformational linguistics remain hard to come by for the general public. The extremely rapid development in linguistics has its drawbacks: the relevant works have a provisional, unfinished air, definitive publications are delayed, and the exchange of ideas is carried on in closed conferences, in mimeographed reports or limited publications intended for the small circle of initiates, or, at best, in restricted monographs hid-

den in technical journals. Moreover, by the time the interested reader has succeeded in getting hold of a few such documents, he can be sure that a large part of what he reads is outdated material.

From this point of view *The Structure of Language* corresponds to an acute need felt by workers in many related fields and by the interested public at large. For the book includes not only the basic articles, mainly by Z. S. Harris and N. Chomsky, that form the foundation of transformational grammar, but adds a number of papers which either show subsequent developments in theory, or, like E. S. Klima's "Negation in English," give a recent sample of transformational analysis at its best. Many a time in the past I was at a loss when asked by interested students what to read to get acquainted with transformational grammar. Beyond referring to Chomsky's first booklet, *Syntactic Structures*,¹ I could not help them. Now I can add *The Structure of Language* and be confident that a really interested reader will be able to carry on from there.

He has to be quite devoted though. In order to appreciate the power of transformational grammar the reader has to follow the analysis of the given examples step by step or even go beyond them on his own. A mere acquaintance with the theory will not do. Much the same way as a mere knowledge of metamathematics without the ability to perform at least elementary operations would not give one the feel of mathematics. Yet, unfortunately, most of the writing the reader has to wrestle with in this volume is top-heavy in this respect. There is more theory of transformations than transformations, more meta-grammar than grammar.

¹ Chomsky, Noam, *Syntactic Structures*, 's-Gravenhage; Mouton, 1957.

more methodological superstructure of linguistics than structure of language. One gets the impression of an enormous scaffolding concealing, or even stifling, the edifice itself. This, and the overburdened and cumbersome style we find on many pages makes the reader's task very demanding indeed.

This preponderance of theory over content has another danger too. Chomsky and his associates view transformations primarily as elements in a generative grammar. The emphasis the editors give to this approach tends to ignore other possibilities. Without disparaging the role transformations may play in a generative grammar, one can view them profitably as merely mapping or coordinating sentences or sentence-structures. The editors, through their selection and comments give the impression that we do have a clear concept of what transformations are and how this concept fits into an equally clear metalinguistic theory. The fact that we are able to formulate some transformations and that we can solve certain problems by their means does not prove this any more than the fact that one can do mathematics proves that one has a clear concept of what mathematics is really about. The history of science shows that conceptual clarification usually lags behind scientific progress, often considerably. There is no reason to suppose that in the case of linguistics this will be otherwise. The reader should concentrate on the core of actual transformations rather than on the wrappings of theory.

The scope of the book extends beyond transformational grammar. There are some papers on linguistic theory in general (like Chomsky's "On the Notion 'Rule of Grammar'"), two papers by M. Halle on phonology, Harris's fundamental article on discourse analysis, a rather ambitious attempt by the

editors themselves to establish the principles of scientific semantics, and some contributions to psycholinguistics including Chomsky's brilliant review of B. F. Skinner's *Verbal Behavior*.²

As we see, the selected material indeed justifies the main title of the book: by reading them one gets a fair picture of the exciting work currently in progress on the structure of language. When, on the other hand, we ask for the justification of the subtitle, "Readings in the Philosophy of Language," we are confronted with a fundamental confusion underlying the whole conception of the book. According to Fodor and Katz "the philosophy of language can be conceived of as a discipline concerned with the analysis of the concepts, theories, and the methodology of linguistics. On this conception, the philosophy of language is the philosophy of linguistics, a discipline analogous in every respect to the philosophy of physics, the philosophy of mathematics, the philosophy of psychology, and the like." (p. 18) The fact that authors like Carnap or Quine, Ryle or Austin, who are generally regarded as philosophers of language, did not follow, or rarely did follow, such a discipline, does not seem to bother Fodor and Katz. On the contrary, in their "Introduction" they suggest that what was wrong with their philosophy of language is that they did not do something different from what they were actually doing. The term, "philosophy of language" is indeed vague enough to cover many things, and the philosophy of linguistics may be one of them. But this is by no means a reason to question the validity of conceptual investigations based upon the facts

² Skinner, B. F., *Verbal Behavior*, New York: Appleton-Century-Crofts, 1957.

N. Chomsky, "Review of B. F. Skinner, *Verbal Behavior*," *Language*, XXXV (1959), 26-58.

of language (and not upon the conceptual framework of linguistics) pursued by philosophers from Aristotle to Austin. It stands to reason that a better understanding of the working of language afforded by modern linguistics cannot but help this enterprise, which I would prefer to call "linguistic philosophy." By ignoring this aspect Fodor and Katz do a signal disservice to the cause they wish to advocate: the importance of linguistics for philosophy. Fortunately, at least Katz has later realized and corrected this error.³ As it is, the few articles included by Carnap, Church and Quine (and none, incidentally, by representatives of the Oxford School) do not fit into the book, except perhaps to usher in the editors' own "Analyticity and Contradiction in Natural Language." This latter piece is the only one illustrating the possibility of deriving philosophical conclusions by the application of metalinguistics. In spite of the editors' philosophical theories, however, the volume can be used with profit by linguistic philosophers, simply because of the linguistic data and the fertility of the theory the technical articles contain. For readers from other fields the philosophical misconceptions will be still less disturbing.

Yet they too will deplore the "unfinished" appearance of this collection. There is no index and the only bibliography is the one attached to an article hidden in the middle of the book. The volume may be not ripe in its conception and execution; the content, however, indispensable for all students of language, is now easily available for the first time.

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³ Katz, Jerrold J., *The Philosophy of Language*, Cambridge, Mass.: Center for Cognitive Studies, Harvard University (mimeographed), 1965.

STREET-CORNER RESEARCH:
AN EXPERIMENTAL APPROACH
TO THE JUVENILE DELINQUENT.
Ralph Schwitzgebel.
Cambridge: Harvard University Press,
1964 163 pp. \$3.95.

Probably no single approach to a pressing social problem has received such national publicity as has Street-Corner Research. Reports of this project have appeared in popular magazines and newspapers, and financial support has been provided by several foundations such as Ford and Hayden. Apart from any contribution this project makes to our knowledge of the problem of juvenile delinquency, it warrants attention as an instance of a current social phenomenon which can be characterized as a tendency to respond to the sensational without a rational appraisal of its value.

Street-Corner Research was established as a means of gathering information about how young people get into severe difficulty with the law and society in general. Mr. Schwitzgebel brought to this endeavor the notion that the root of delinquency lies in the delinquent himself, and that a solution to the problem might best be sought within the youngster. He attempted to base his work on two earlier experiments. One of these was conducted by Herbert Streaan, who had considerable success when he encouraged patients in psychotherapy to prescribe their own treatment program. The second preliminary work was carried out by Dr. Charles Slack at Harvard who paid young delinquents to tape record dreams and fantasies. Dr. Slack had observed that the adolescents became less antisocial as the recording sessions proceeded over an extended period of time.

Street-Corner Research hired 30 youngsters all of whom had a long his-

tory of delinquency and court appearances. Some of the boys had been arrested as many as 20 times. They had been in state reform schools up to four years and several had served sentences in adult prisons.

Mr. Schwitzgebel describes their involvement at the project as follows:

These boys were employed as experimental subjects or research assistants in various experimental activities to help experimenters find new methods for reducing adolescent crime. They worked at the laboratory approximately one hour a day from two to five days a week for a period of nine to twelve months. They were paid immediately in cash each day following their work. The wages for these boys ranged from fifty cents to two dollars an hour. Data regarding their activities and their views of the world and themselves was continually collected and recorded. In addition the experimenters eagerly sought the boys' own suggestions as to how delinquent activities might be reduced. (p. 11)

Essentially this book presents the activities of the delinquents at Street-Corner Research and describes the theoretical and philosophical underpinnings of the project.

Mr. Schwitzgebel indicates that participation in Street-Corner Research led to a marked decline in overt delinquent acts committed by the research subjects. Evidence for this is presented in a series of rather inconclusive statistical tables found in the appendices.

A reliance on overt behavior as a criterion for evaluating the success of any type of intervention has limitations. One problem in using the number of delinquent acts as a measure of change concerns the relative severity of anti-social forms of behavior. Can

it be said, for example, which is a more serious form of behavior; car theft, or breaking and entering? They are both delinquent acts, subject to arrest, punishable by law, but it is difficult to determine if the experimental subject who steals a car on one occasion has really improved over the control subject who broke and entered on two different occasions.

Another problem in utilizing overt behavior as a criterion for change involves the meaning of the act in terms of individual dynamics. The youngster's overt action does not necessarily reflect his intrapersonal condition. If we consider the delinquent act as a symptom, as Mr. Schwitzgebel suggests we do, rather than as a disease entity in itself, then it is possible that its presence could indicate any number of personal problems including adolescent rebellion, neurosis, and even psychosis. The reduction of delinquent behavior does not guarantee a healthier adaptation, for possibly new symptoms, more disturbed in character, may soon appear. (Considering the project's activities with drugs this might well be the case.)

In reading of the activities described in the book it becomes obvious that positive changes did occur with some of the subjects. It was more than their overt behavior that was modified. Apparently basic attitudes, motivations, and personality were altered. Mr. Schwitzgebel suggests this when he discusses the phases of Apathy, Anger, Despair, Insight, and Philosophical Transformation which some delinquents appeared to experience while working at the project. A crucial question is what aspect of the program led to these changes? Were the changes a function of the tape-recorded sessions and concomitant self-exploration they precipitated? Were they the result of

the delinquent's new feelings of acceptance by the project staff? Did they result from the offer of a paying job and other reinforcements for participation and positive behavior? Were they the outcome of a blend of these factors? Were they caused by none of these, but solely a consequence of having a place to go which served as an antidote to boredom?

The major reason that positive change occurred is not that the subject got paid to talk into a tape recorder, ventilating his feelings of anger and frustration in an accepting milieu, but that this activity served as a stimulant for the gradual development of an intensive relationship with another human being. It was through this meaningful interaction that a mutual consideration of the youngster's problem could eventually occur. *Street-Corner Research* tends to de-emphasize the significance of this relationship. Mr. Schwitzgebel tells us that the experimenters mainly listen, and guide the teenagers as little as possible. At the same time he points out that the theories and concepts of analytic psychology are used to gain an understanding of the intensive personal relationship which develops between the subject and experimenters. It would have been valuable if Mr. Schwitzgebel had described in what ways this theoretical knowledge was utilized, and how it helped in gaining an understanding of relationship. If the method is "extraordinarily simple"¹ and requires no special training, why is it necessary to be concerned with the relationship at all?

Additional issues are raised by the section of this book which concerns the role and personality of the experimenter. *Street-Corner Research* interviewers came from various backgrounds—

one was a psychologist, another a priest, another a philosophy student. Each used a somewhat different approach with the delinquents. Mr. Schwitzgebel is willing to call these workers "therapists" but felt it necessary to divide them into "orthodox" and "unorthodox" groups. (p. 116) He suggests that there are personality characteristics which cluster in the unorthodox worker which make him more successful with this type of subject. These characteristics are left undefined. Mr. Schwitzgebel indicates that such unorthodox personnel are needed because delinquency "should not be viewed exclusively as a behavioral science endeavor...but as a task belonging to the arts and philosophy as well." (p. 131) The fact of the matter is that there are many successful workers in the field of delinquency today who have used unusual and clever, nonpsychoanalytic innovations in their efforts to help this group of youngsters. In their backgrounds and in on-going programs, however, is found continuing training, varied experience, and individual supervision which enables them to comprehend what it is they are doing.

The suggestion that bankclerks, plumbers, housewives, and other non-professional people without special training make the best workers because they are free from theoretical biases is open to serious question. This might be the case if all that was needed was a passive listener who essentially does nothing but operate a recording device. It has been demonstrated, however, that the treatment process is considerably more complex. Further research will be necessary to determine how competently these people can carry out the type of relationship required to bring about permanent changes in behavior. One also wonders how untrained personnel could use significant concepts of psy-

¹ C. Brossard, "Kids in Trouble," *Look*, XXVI (Dec., 1962), 109.

chology in their work with youthful offenders.

Mr. Schwitzgebel repeatedly stresses that a major intent of the project was to provide the teenagers with an experience of honest treatment. By being straightforward and direct with them it was hoped that a more positive image of the adult world might be conveyed. This is a sound and appropriate principle in work with this type of young person. In actual practice however there seems to exist some contradiction. The adolescents were told that, "We are interested in studying and understanding teenagers, especially those who have been in trouble. We are not trying to straighten out anybody." (p. 21) But what the project was in fact focused upon was a correction of deviant behavior. The experimenters were very much interested in seeking "scientific strategies" with "dramatic impact" for eliminating delinquent activity. (p. 99)

In addition, Mr. Schwitzgebel suggests that the interaction between the boy and his experimenter changed from an employer-employee relationship to that of "friends" as the job neared completion. (p. 75) The authenticity of this friendship is doubtful and represents, for this reviewer, the most serious defect of the entire project. We are told:

Much of the experimenter's concern about termination centered around the fear that the friendship following termination would continue indefinitely. Obviously, the experimenters would not have time for all these friendships nor would these friendships be at the level most meaningful for the experimenters. Being a friend to these boys could become a full-time job. (p. 77)

It is important to know how experi-

menters viewed the relationship; did they, however, reveal to the youngsters who had become attached to them the superficial nature of their friendship? In brief what the project is saying is: it was all right for the boys to be close when they were experimental subjects, but let's not allow them to get carried away or forget their place.

Finally, Mr. Schwitzgebel implies that his book describes a "scientific" experiment. Unfortunately this is not the case. As previously indicated the use of overt behavior as a criterion for change is extremely weak; there are no other methods of evaluation employed by the project. There is no presentation of evidence for the validity or reliability of any aspect of the reported work. *Street-Corner Research* presents only limited anecdotal material about the process of treatment, much of it selected, apparently, because of its shocking and grotesque nature. In all reports of this project that I have encountered, including this book, the same case is cited. Surely there must be additional illustrations of this experimental approach which could be shared with an interested public.

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COMPULSORY MIS-EDUCATION.
by Paul Goodman.
New York, Horizon Press, 1964.
189 pp. \$3.95.

In your heart, you know Paul Goodman is right when he says, for example:

... this technique of socializing is unerring, and the result is a generation not notable for self-confidence, determination, initiative, or ingenuous idealism. It is a result unique in

history: *an elite that has imposed on itself a morale fit for slaves.*

The above quotation is drawn from a chapter entitled "The Unteachable Generation," which is a not-unrepresentative part of a wail of an attack on American education by Paul Goodman. The context from which the quote was unhesitatingly ripped is a discussion of why it is so difficult to teach the current college generation, coming as it does largely from a middle class which actively discourages earnestness, feeling, vocation, and identity. Now I do not mean to suggest, by the opening lines of this review, that there is really any similarity between Mr. Goodman and a certain recently well-trounced presidential candidate. But the generalization expressed in the slogan-like italicized lines (the italics are Goodman's) is patently false; it reflects a troubling penchant on Goodman's part to view real, complex problems in simplistic fashion, and the assumption of its truth paves the way for the proposal of sweeping solutions which just do not fit the problems they purport to solve.

These are hard things to say, because, for me, Goodman is squarely on the side of the angels. His concerns about mechanistic tendencies in education are genuine and provoke thought about the perhaps too-facile administrative proposals of Dr. Conant, or the manipulative glee with which some programmers box knowledge in pupil-proof packages. Goodman's concern about the young and the sometimes terrible problems of growing up we face them with, is where every educator's concern should be, if educator he is. Finally, his continued efforts, in this and other writings, to view education as a humanizing process if it is anything, as a process which is the province and responsibility of the whole society, and

as something which is not necessarily equivalent with what goes on in the schools, reflect what Goodman essentially is—a passionate humanist.

What is it that goes wrong? Where does the trouble lie which leads a deeply concerned, intelligent teacher and writer from such considerations through the kind of programmatic (to put it politely) generalizations exemplified in italics above, to, among other things, a proposal to abolish public compulsory schooling as the primary educational agent of our society? I think that part of it must be a very profound despair at what, in Goodman's view, is being done to a defenseless youth by the monolithic juggernaut of an increasingly systematized and amoral society. Such despair is justified in response to a Harlem school whose principal will have quiet classrooms and hallways at any cost, including the repression of any spontaneity the kids in the school might have brought to the business of learning. It is justified in response to the efforts of schoolmen to lure drop-outs back to schools in the absence of any real consideration of their needs as young, potentially productive human beings; and it is amply justified when directed at the sort of vocationalism induced in some of our test-wise high school and college youth when they should be doing some exploring of their world and themselves.

But Goodman's despair at these practices has become global; society has become the "rat-race," the room without doors; and solutions to educational and social problems become, of necessity, quixotic slashes of his sharp pen, as if the problems were intellectual Gordian knots and the rest of us were enslaved by the ritual of standard operating procedure. Have no doubt about it, there are Harlem schools such as the one which Goodman cites in his book.

But there is also good and healthy movement on the part of the Banks Street College and others to effect change in such schools. Some wisdom is even being brought to bear on the problems of young men and women who drop out of schools, although a "solution" is not in sight and there will be much logrolling with federal funds no doubt. The hegemony of the standardized test with standardized answers, and the use of high school and college as prerequisites to salability in the industrial or academic marketplace—these are the toughest, for they are success-making. But university people are beginning to take hard looks at higher education—witness Esther Raushenbush's new book, *The Student and his Studies*—and some colleges and universities are even daring to take seriously the prospect of a humanistic undergraduate education. Even the curriculum developers have begun to turn their thinking from "teacher-proof" and student-proof curricula; perhaps slowly, but the turn is being made. And lo! There is even some activity which suggests that the teaching of the arts as an intrinsically important element in the elementary and secondary school curriculum is being given serious attention.

But these efforts may be, in the classic phrase, treating the symptoms and not the malady. The fact that there are schools which function like prisons; that there are absurdly short-sighted attempts to provide a mechanical remedy to the school drop-out problem; and that there are students in our colleges for whom genuine idealism is a truly alien notion—all of this may be indicative of a deep-seated disease in our society which is reflected and advanced by the manner and motives with which the schools are organized and run.

I am inclined to agree with Goodman that all is not well with a social

system or its managers in government, industry, or the schools when, for example, the problem of *de facto* school segregation is not even recognized by a Boston School Committee—by official fiat, no less; or when men in government sponsored think-tanks coolly calculate self-genocidal strategies in the thermonuclear game of hit first and duck fast. But for such maladies, polemics and proposed solutions which are *inhuman in their scale and scope* are not going to enable people, who are as concerned as Paul Goodman is, to effect change, either in the Boston schools or in the use of thermonuclear power.

I am also entirely with Goodman when he asserts time and again in this book that the processes of education and politics and industry need to be humanized; need to involve the participation and, indeed, the initiative of students and teachers, the electorate, and the workers in highly rationalized, soon to be automated production and distribution processes. But Goodman's despair and indignation directed toward the schools begins to sound rather odd when one realizes that, of all the social institutions in the United States, the schools may finally be coming of age in the recognition of the necessity to distribute decision-making and initiative. Through all the bandwagon-jumping, grantsmanship, and people-manipulation strategies, there is perceivable the beginnings of a readiness by educators to decentralize and individualize the teaching-learning process, while, at the same time, rationalizing and centralizing administrative processes for greater efficiency.

I shall try, in ending this review, to propose a very interesting but very damaging paradox which I find in Goodman's writing on the schools and his social criticism in general. It is this: although the whole thrust of Good-

man's pleas for the humanization of educational and social processes generally should suggest the development of strategies for activating people, as human beings, in their own education, in politics, and in the organization of production processes, Goodman offers "simple, functional solutions" which, precisely, do not involve people, as human beings, in the process of effecting the needed change.

His proposal to abolish compulsory education offers a solution which is not human in scale, but administrative and manipulative. It ignores constraints which, for the laborers in the vineyards, are political and social realities; the primary one being that for any change to be real, people have to move and move other people in turn. This is the lesson of the Negro Freedom Movement, and it is a hard but exciting lesson as those who were drawn to Selma, Alabama, will testify. Finally, and most damaging, it offers the prospect of infinite and truly educational horizons, if only this "simple" key is turned in the rusty lock of our habitual responses and the door opened to educational voluntarism.

Goodman's proposal is radical, not in the political sense, but in the primary sense of an attempt to cut to the core of a problem. And there is, I think, a canny strategy involved. For once one takes seriously the prospect of making school attendance voluntary, the problem of school dropouts reaches unimaginable proportions and we are forced to 1) redesign our educational system so that it becomes attractive for kids to be involved and learn; and 2) face squarely the need for industry and public agencies other than the school to take responsibility for effective job training. This means that both the public and private sectors of our economy are literally enmeshed in the problems of education, and the "educative socie-

ty" becomes possible. This strategy may be called the "domino effect" and is posited on the grounds that if you hit deeply enough at the social structure, all else will be forced to follow. It is simple, functional, and attractive—but impossible. To put it crassly, it won't sell, because it dislocates social processes at far too deep a level. It is no good to cite Summerhill and Summerhill-like experiments in the United States, for they are not only designed on the principle of voluntarism but are initiated and subscribed to by people for whom voluntarism is already a prime social good. The circle is closed and it is vicious, primarily because Goodman's proposal is a superimposition on a situation which *requires* that the people concerned be moved, educated, and activated to initiate change in the organization and content of the educational process. Again the civil rights movement counts, at this moment in our history, as the most significant dynamic in American society for social and educational change. It is a movement of people, and it is pregnant with possibilities for our society as a whole. It is a force with an ever-widening human base and a strategy. And for this movement, there are no closed doors.

There is no intent here to pollyanna movements for educational and social change which are incredibly agonizing to achieve and which can only offer directions and spirit, not solutions. Perhaps it is the fact that Goodman seeks solutions and proposes certain structural changes *as solutions* that bothers me most about his approach. For it is infernally easy to talk solutions to social and educational problems, but probably impossible to achieve them. Social change is not, in any simple sense, a matter of solutions.

Goodman has been able to distance himself from the dirty business of fight-

ing for small increments of change, and distance is necessary if you are to see where you are and should be going. But I fear that he is both too close and much too far away from the knots which have to be unraveled in American education to bring to bear his canny and resourceful intelligence. Paul Goodman is a dissenter by temperament and by profession, and American education needs dissenters. But his proposals turn out to be more polemic and protest than innovation, more slogan than strategy.

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UNWILLINGLY TO SCHOOL.

by Jack H. Kahn and
Jean P. Nursten.

*New York: Macmillan, 1964. 187 pp.
\$2.45.*

The authors, a psychiatrist and psychiatric social worker in Great Britain, have written the first book addressed to school phobia. The foreword describes the book as "outlining the physical and emotional problems of school phobia," and giving "a theoretical framework in which these become understandable." In addition "a frank description is given of the conflicts in the relationships between workers in the various services which are called upon to deal with the many-sided problems." The book is of vital interest to "teachers, educator welfare officers, child care officers, probation officers, magistrates, general practitioners, and school medical officers," as well as the staff of child guidance clinics and child psychiatric units. It is in the attempt to address such a large and varied audience that the principal weaknesses of the book emerge.

Essentially the book discusses three separate areas: school phobia, psychoanalytic theory, and the roles of the

various professionals in Great Britain who address themselves to the care of children.

The authors use the term school refusal to encompass all instances of failure to attend school and then distinguish truancy from school phobia. Symptoms indicating school phobia include acute anxiety on the part of the child and mother, recurrent physical symptoms, conscious attempts by the mother to get the child to school, and the child's failure to respond to reassurances about the absence of danger at school. The truant is described as coming from a lower social class, being of lower intelligence, experiencing no conflict about not going to school, and enjoying the activities which he substitutes for school attendance. They describe the emotional climate of the school phobic's home as being "intense" while the truant's home is described as "lacking." The authors point out that in addition to the mutual separation anxiety which characterizes the mother-child relationship in cases of acute school phobia, the development of the phobia in the school situation is facilitated by the fact that school is a new kind of reality for the child in which his omnipotence and narcissism is challenged.

The section which describes the history of the concept of school phobia and the variations in types of school phobia is an adequate presentation of the available literature. Coolidge's¹ observations, which distinguish school phobics who are essentially intact except for the school situation from those, generally older children, whose school phobia is part of a pervasive personali-

¹ Coolidge, J. C., M. L. Willer, E. Tessman, and S. Waldfogel, "School phobia in adolescence: A manifestation of severe character disturbance." *Amer. Journal of Orthopsychiatry*, 1960, 30:3, 599-607.

ty disorder, are cited, as is Adelaide Johnson's original formulation of the psychodynamics of school phobia. The authors recognize a variety of family situations in school phobia and the interaction of the symptoms and cultural pressures.

Having whetted our appetites for a more thorough discussion of the problem and a clarification of their statement that in most cases the treatment need be no more than the holding of a "watching brief," and "the kind of reassurance that makes no pretense at face-saving physical explanations," the authors enter a long digression about the services available to school-phobic children in Great Britain. They do not completely return to the central issues they posed. One would think that their description of the educational, medical, legal, psychological, and social services would hardly be necessary for a sophisticated British audience. Nor is it particularly relevant to an American audience. Within this section statements of extreme naiveté abound. For example, we are told that "a good school welfare officer is certainly well planned to coordinate the welfare services in relation to children's needs." Also that "the distinguishing characteristic of truancy is that it carries an obvious gain. The truant enjoys truancy." People working in slum areas or with antisocial children might well dispute the authors' understanding of these children. Furthermore, a "watching brief" and reassurance, while it may be of value with respect to the symptom, is not directed to underlying problems. The study of adolescents and young adults who have had school phobia as young children suggests that, in many cases, school phobia is predictive of moderate to severe difficulties later in life.²

² Coolidge, J. C., R. D. Brodie and B. Feeney. "A ten-year follow-up study of sixty-

We are appraised of the use of the court in school-phobia cases and of the existence of a law which may impose fines of £1, £5, £10 for school refusal. After a series of cases illustrative of child guidance clinic work the authors turn to a ten page outline of psychoanalytic theory which is too simplified for the average student of psychology and too disjointed to convince the skeptical layman.

The authors return to school refusal which they group under the headings (A) psychoneurotic, including phobic conditions, (B) character disorders, and (C) psychotic conditions. They go on to say that treatment should be directed to the underlying psychiatric disturbances, and not to the symptom of school refusal.

The remainder of the book describes the role of various disciplines—psychiatry, psychology, and psychiatric social work—in child guidance clinics. The material presented here is interesting and of value to people who would like to understand something of how a clinic goes about attempting to alter the behavior of children and their parents.

It is difficult for this reviewer to provide a succinct summary of this book since it ranges over so many areas. The material on school phobia is scattered throughout the book, and leaves the reader with more questions than answers with respect to differential diagnosis and differential treatment. While the book contains many valid observations and inferences it is incoherent and repetitious in many places. The serious student of school phobia is advised to study the works listed as references in the book and in a previous article by the same authors, published in the *American Journal of Orthopsy-*

chiatry, 1964, 34:4, 675-684.

chiatry in July, 1962. Perhaps the authors, in attempting to cover so many areas, failed to do justice to the symptom itself.

In spite of the shortcomings noted above which are particularly relevant from the vantage point of a psychiatric clinic for children, the authors are to be commended for the initial effort to pull together material on this difficult symptom from divergent sources. The book should be of considerable value to school personnel for whom the school-phobic child is often an enigma who arouses considerable guilt and feelings of helplessness in teachers and principals.

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GUARDIANS OF TRADITION:
AMERICAN SCHOOLBOOKS OF THE
NINETEENTH CENTURY.
by Ruth Miller Elson.
*Lincoln: University of
Nebraska Press, 1964. 414 pp. \$7.00.*

This is an efficient study of the social ideas in a thousand elementary textbooks that were popular in the nineteenth century. Mrs. Elson, who teaches at Finch College, also intends this book to show how children were affected by the material they were obliged to memorize in school, but she is careful to avoid suggesting direct or measurable influence. Her survey includes extended discussion of the schoolbook ideas of God, nature, race, and nationality, as well as the most favored concepts about the political economy.

Mrs. Elson's restrained narrative tells a story of unrelieved ugliness and meanness. To see America in the books American children memorized is to see all the worst qualities of a smug, humorless, and sanctimonious province pre-

sented in the most strident way. A less generous or more narrow view of the world cannot be imagined. But Mrs. Elson makes her way through such junk with sobriety and remarkable patience. One result is admirable detachment; another is a certain stylistic flatness.

I know of no work that shows the basic conservatism of nineteenth-century education as well as this one. Regardless of the ideas with which Mrs. Elson is concerned, she demonstrates that the schoolbooks were universally committed to socialization, not learning, to accepted character and traditional morality, not individual growth or intellectual competence. The function of primary education, if the schoolbooks can be trusted (and they can), was to convert the unregulated little monsters into solid citizens, pious providers, and thus exemplary Americans. That the values and norms inculcated would be serviceable only in some nightmare land of prigs and prudes is obviously beside the point. American children were trained to enter an ideal world that no man ever saw; the actual world they entered must have quickly reoriented the young graduates, or else, perhaps, the schoolbook lessons had never been swallowed whole. Yet American society in the nineteenth century did drone with many of the qualities Mrs. Elson found in the textbooks.

The schoolbooks were a virtual monopoly of New England; the majority of the authors were yankees and the characteristic point of view represented the brahmin social code and a vulgarized puritan ethic simultaneously. Coating everything else the books had to say was a syrupy effulgence that was presumably the residue of the God of both Edwards and Emerson. That residual God assured young Americans that the world had been created for them, that the road to heaven was made of gold

and astute travellers would gather souvenirs along the way as certain tokens of their destination. The students of a century (at least) were taught that poverty was a fault not a misfortune (and that the fault could be deduced from the misfortune), that since all was well with the world, any part of the world that did not share in the divine cornucopia was, by that fact, clearly being punished for some immorality or other. Mrs. Elson quotes an 1840 reader to good purpose: "Misfortune is mostly the result of misconduct." (p. 254)

The morality of the schoolbooks depended on a benign God who had never heard of Darwin, who preferred agriculture to other ways of staying alive, who was Himself a white, anglo-saxon, protestant American, and extremely proud of that fact.

During the course of the century, the books tend to grow increasingly secular, theology becomes ethics, and ideas of race seem to replace religion as the grand criterion by which mankind may be divided into American sheep and foreign goats. But religion does not in fact disappear; it is, rather, absorbed more completely into American nationalism. By the end of the century the schoolbooks take for granted that pupils will understand that Americanism is a state of religion, that patriotism is, by definition, pious. The hatred of Indians, Negroes, Catholics, Jews, foreigners, and labor advocated by the books merely reflects the sense that God's country was intended as a refuge for Aryans who, there, should be kept free from pollution. As Mrs. Elson puts it:

Thus the United States is a Protestant nation with a divinely appointed mission. As the modern Chosen People its inhabitants have a special motive for piety, and concomitantly they

have a special motive for patriotism. American nationalism and religion are thoroughly interwoven; love of the American nation is a correlative of love of God. (p. 62)

The geography books gave more attention to national character than to physical characteristics. Wherever the students were taught to look the universe was judged by its desire and ability to become America, that is to say, New England. The history books idolized the safe heroes, those men who exemplified some aspect of the myth of the divine political economy dreamed of in New England federalism and whiggery: Franklin, Washington, Hamilton, Boone, Marshall, and Webster. Jefferson and Jackson were virtually ignored.

In all the schoolbooks there was a profound suspicion and distrust of education. The moralism of the texts led easily to the conclusion that America stood for the heart and Europe for the head. Anti-intellectualism thus became a necessary ingredient in patriotism. "Useful" knowledge was contrasted to allegedly frivolous and effeminate book-larnin'.

The sturdy yeoman who feels God with his plow was the explicit ideal of many of the books. The idealization of the nation was equally extreme, as Mrs. Elson says:

Always the child is shown an America serene and united. He must be tolerant of other religions, but he should not recognize them as equal to Protestantism on pain of subversion of both church and state. He should be moved emotionally by the inhumanity of war, but he should admire without reserve the exploits of military heroes and be happy to sacrifice his life in any war in which his country is engaged. (p. 341)

There are no new ideas in *Guardians of Tradition*. Most of the actual substance of the ideas with which Mrs. Elson is concerned had emerged in seventeenth-century Massachusetts Bay, and historians have long been familiar with the content of that aspect of America's intellectual history. Mrs. Elson's work would have been somewhat improved with a more explicit analysis of that background to her story. What is new and valuable in her study is the intensity and textures of those old ideas in the newer form of popular schoolbooks. A greater contextual awareness would have strengthened the book, but the textual emphasis is mostly justified by the final picture that emerges. What a nasty place the little red school house was.

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NATURAL LANGUAGE AND
THE COMPUTER.

Edited by Paul L. Garvin.
*New York: McGraw-Hill Book
Company, 1963. 398 pp. \$12.75.*

The purpose of this book, as stated in the preface, is "... to survey the emerging field of language-data processing, in which by 'language' is meant a natural language such as English or Russian, and not an artificial language such as the languages devised by mathematicians or logicians." (p. xi) The book was not designed to be a survey of the field from a unified point of view, but rather, consists of seventeen more or less independent chapters representing fourteen authors. Some continuity is provided by the fact that the editor contributed three chapters of his own and co-authored a fourth. However, the overall plan in selection of authors was to "present a cross section of opinions

and approaches, with the aim of being representative of major trends in the field rather than of reflecting the editor's own viewpoint." (p. xi) In this respect, the book is reasonably successful. All of the authors are recognized authorities in their respective fields and certainly do not belong to any single school of thought. However, the book contains almost no explicit description or comparison of trends, approaches, opinions, etc., and it is not made clear as to whether there do, in fact, exist various established trends which can be characterized and compared, or whether the trends are still in an "emergent" state and are not yet clearly defined or definable. A title such as "Readings in . . ." would have been a more appropriate description of the content of the book.

In reviewing a book of this type, it is useful to consider separately, as far as possible, the question of how well the book represents the field, on the one hand, and the question of the status of the field on the other.

With regard to the first question, the book is quite good. It has been difficult in the past for someone not actively working in the field to gain some perspective and insight into automatic language processing. Most of the published material consists of semi-private, circulated reports and memoranda, and even the relatively few articles which have appeared in widely available journals usually refer extensively to material inaccessible to the outsider. I have frequently been asked for a reasonably limited bibliography to serve as an introduction to the field for a nonspecialist, and have found it difficult to do so. Now, I would recommend *Natural Languages and the Computer*, but would accompany the recommendation with a number of reservations and warnings which are discussed be-

low, but can be summed up by the admonition to take it all with a grain of salt.

The book is organized into six parts:

1) *Three linguistic models of language*, with contributions from P. Garvin, R. Stockwell and T. Sebeok; 2) *Mathematics and Computation*, with contributions from W. Karush, M. Melkanoff and L. Ray; 3) *Language-data processing*, with contributions from P. Garvin, M. Maron and H. Edmundson; 4) *Machine translation*, with contributions from D. Hays, K. Harper, P. Garvin and J. Mersel; 5) *Information retrieval*, with contributions from D. Swanson, R. Hayes and L. Travis; 6) *Overview*, consisting of a single chapter co-authored by P. Garvin and W. Karush.

The chapters in Part 1 by Garvin and by Stockwell are straight-forward presentations of the definitional model of language and of transformational theory, respectively. Sebeok's chapter is entitled, "The informational model of language: analog and digital coding in animal and human communication." It is highly speculative, and has no testable ramifications. I don't see why it was included in the collection, except perhaps to add a touch of spice to the book for people whose tastes run in that direction. It would have been more appropriate to include a chapter on the Lamb-Hockett stratificational model.

Part 2 is the weakest section of the book. The three chapters in this part are apparently designed for a reader with no knowledge of mathematics or computers and are thus too elementary and superficial to be of interest to a reader knowledgeable in these areas. Unfortunately, these chapters are also poor tutorially and are, in fact, misleading in many ways and, thus, contribute nothing to the book. Karush's chapter, "On the Use of Mathematics in Be-

havioral Research," is actually a description of the principles underlying the use of mathematics in the physical sciences accompanied by oft-repeated comments to the effect that the extension of similar methods to new, presently non-mathematical fields will be good for both the particular field and for mathematics. No effort is made to relate the principles to current work in mathematical or algebraic linguistics and, in fact, the existence of such work is not even hinted at. The remaining two chapters in this part—one on "Computer Languages" by Melkanoff and one on "Programming for Natural Language" by Ray—are well-intentioned attempts to provide the neophyte with some understanding of programming, but they are likely to discourage rather than encourage the reader to whom they are directed.

The three chapters in Part 3 are representative of much of the literature in the field and are worth reading for this reason. However, they have very little substantive content. In his chapter, "A Linguist's View of Language-data Processing," Garvin points out, at the outset, that there are two aspects of language-data processing of interest to the linguist. One of these is the use of computers as an aid in linguistic research. The other is the application of linguistics in support of information processing by computers. The remainder of the chapter is essentially a continual repetition of these statements in various contexts, with emphasis on corpus-based discovery procedures. The discussion is concerned entirely with what computers might do—nothing is said about what has been done or, at least, is being done. Maron's chapter, "A Logician's View of Language-data Processing," is equally speculative, but is a good survey of the kind of speculations commonly entertained in the field.

Edmundson's chapter, "A Statistician's View of Linguistic Models and Language-data Processing," is a good survey of what is usually called statistical linguistics. He also mentions several statistically-based experiments in automatic indexing and automatic abstracting, but, through no fault of his own, is unable to evaluate the results except in terms such as, "These results tend to demonstrate the feasibility of. . . ." (p. 175)

The next two parts—on machine translation and information retrieval, respectively—continue in the same vein. Activities are described, but no results are presented and discussed. The chapter by Swanson on "The Formulation of the Retrieval Problem" deserves special mention; it is the only chapter in the book in which a clear and consistent distinction is made between theoretical and pragmatic approaches.

The final part of the book is labeled *Overview* and consists of a single short chapter by Garvin and Karush titled "Linguistics, Data Processing and Mathematics." It is not so much an overview as a continuation of the superficial philosophizing on mathematics and linguistics sprinkled through various earlier chapters, including those by Karush and Garvin.

The main weakness of the book is the false perspective it gives to the reader by emphasizing the theoretical and conceptual aspects of the field. This emphasis would have been appropriate five years earlier when work in the field was just commencing on a large scale and the development of preliminary guiding principles was a necessary first step. However, it is now clear that, at least for the present, automatic language processing is almost entirely a matter of engineering and will remain so for some time to come. The experiments in machine translation and vari-

ous aspects of information retrieval which have been carried out within the framework of the ideas discussed in the book have contributed nothing of theoretical or practical value. What useful work has been done was motivated by practical rather than theoretical considerations. The substantive part of the field is ignored in the book and what remains is largely pretentious, as would have been revealed by serious discussion of experimental results.

In summary, this book is a welcome and useful documentation of the dominant ideas and attempts at theorizing which characterize the present state of the field of automatic language processing. The editor has done a good job in selecting representative authors; the paucity of substantive content is an accurate reflection of the field rather than of the selection of material.

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GREAT ASPIRATIONS: THE
GRADUATE SCHOOL PLANS OF AMERICA'S
COLLEGE SENIORS.

Edited by James Allan Davis.

Aldine Publishing Co., 1964. 319 pp.
\$8.95.

Great Aspirations will doubtlessly inspire great expectations when it appears, for it represents an inquiry into a national problem of first importance, employing all of the sophistications and techniques developed in the past three decades of public opinion research. How did this book come to be, and for what purpose? It is primarily a study of the attitudes toward, and expectations for, graduate study on the part of a very large sample of graduating college seniors in the spring of 1961. It was carried out by one of the best estab-

lished institutes for opinion research, National Opinion Research Center, with sponsorship from three national foundations of great prestige, namely the U. S. Office of Education, the National Science Foundation, and the National Institutes of Health. With this sponsorship and with the skills at the command of NORC, the result can hardly be unilluminating or unimportant.

The respondents in this survey totaled over 36,000 selected from the graduating classes of 135 American colleges and universities in the spring of 1961. That the selection of this sample was done with the best of contemporary skills is not disputed by this reviewer, and the logic of its selection is amply defended both in the main text and in a valuable supplementary appendix. Any reader will appreciate that this is, even by contemporary standards, a massive sample, and for certain analyses, the author and his associates have employed a representative sub-sample of a little over 3,000.

To these graduating seniors a questionnaire of impressive dimensions was administered. It comprised sixty-two questions and requires twenty-four pages to reproduce in an appendix to this volume. It is a pre-coded instrument which permits only the checking of multiple responses to each. All the same, it is probable that only captive audiences, reinforced by generous good will, would consent to submit themselves to this protracted interrogation. Still, such seem to have been the 36,000 American seniors who completed it. It is divided into four sections: (1) "Plans for the Coming Fall" with particular reference to the possibilities of continued study (2) "Fields and Careers" devoted to attitudes toward different callings and vocations; (3) "College Experience" devoted to questions on the rec-

ord and activities of the respondent during college; (4) "Personal Characteristics," questions devoted to sex, age, family background, religion, and personality attributes.

It would be impossible to make a simple catalog of the findings of this study, for they are contained in a text of over 300 pages, counting appendices, and reported in 89 separate analyses, many of them involving six or more separate tables. Thus, at the outset, the reader should be appraised that we have an extensive cross comparison and breakdown of the various categories of responses described above. In a sense, this volume is a statistical source book and compendium which may meet the special interests of a very wide variety of readers, each of whom will doubtless find something of particular value.

A few general comments on the results are, however, surely in order. This reviewer was impressed that graduate study in our time has become a commonplace to a degree not truly suspected. In fact, it would appear from the analysis in this volume that a graduating senior from high school is less likely to go to college than is the college senior to continue to graduate study. In this unselected sample, 20% reported that they had been accepted for graduate study the following fall, another 12% were unaccepted but planned to attend, still another 45% indicated deferred plans for future graduate study, while only 22% indicated no realistic hopes for further education. Of course, by "graduate study" is meant here any kind of further higher education, i.e., the pursuit of a Master's degree, courses in night school, as well as the pursuit of the advanced professional degrees in medicine, law, business, and the sciences and arts. Still it is apparent that graduate study is no longer an exotic choice of the few,

but rather the declared aspiration of the majority of college graduates. Graduate study is, and will ever more become, a major enterprise in American higher education.

Who elect to go on? Here there is a host of information presented. By and large, students of higher socioeconomic station from larger cities, of the male sex, of the Jewish faith, etc. lead on the path to graduate school. What dissuades many from continuing? Our author believes it is primarily for motivational and not financial reasons. Are there different patterns of selection by field of study? Yes, striking and manifest. The older professions of law and medicine differ radically from business and education in their pattern of recruitment. Do different fields attract different intellectual quality of graduate student? Yes, emphatically. Are different personality types attracted to different fields? Do different fields have different types of graduate study? To all of these questions and dozens of others, this volume supplies firm answers.

What criticisms can be ventured here? There are, I think, a few. It seems to this reviewer that the text is poorly organized in that it contains only four massive chapters, each with its multiple and sometimes bewildering tables. (Chapter 4 is 98 pages long, contains 31 major breakdowns of data, and 60 tables.) This gives to important findings the same emphasis as the trivial, and makes the structure of the whole somewhat hard to follow. Again, the style of the book is marvelously anonymous and impersonal; but perhaps these qualities are inevitable in a report of this kind—for this is a new kind of production, impossible even two decades ago. It is a corporate research aided by all of the skills of modern opinion polling and electronic data processing devices. Its value is beyond question

and its technique of the most advanced, but one feels the loss of personal authorship and a reflecting and interpreting mind behind it.

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SPONTANEOUS ACTIVITY IN EDUCATION.
by Maria Montessori.
Cambridge, Massachusetts:
Robert Bentley, 1964. 384 pp. \$6.50.

THE MONTESSORI ELEMENTARY
MATERIAL.
by Maria Montessori.
Cambridge, Massachusetts:
Robert Bentley, 1964. 512 pp. \$8.50.

Much of the recent enthusiasm for Dr. Maria Montessori and her methods, I suspect, is in part a symptom of our predilection for the magic of *things* and the *tangible*. In a culture oriented toward techniques and rapid technological development, with education itself racked by the accompanying pressures of speed, efficiency, and reform, this is both understandable and deplorable. Given this situation it is easy to reduce her methods to "hardware" for science educators, her concept of liberty to a reliance upon induction. The blithe or hysterical acceptance of these limitations involves the danger of a bland and literal translation of her methods, or a dissipation of that divine madness in a controversy over detail. This would be a pity, for it misses the very informing spirit which makes the republication of her books an event worthy of our attention. We must begin with an understanding of the kind of ardor that animated and informed her own spirit, and then proceed to a critical analysis.

Dr. Montessori, herself, may have assisted misinterpretation by the remark, "Things are the best teacher." This is

somewhat like Baudelaire referring to one of his own poems as "*object inutile*." But one must know that behind the thing (her didactic materials) there is the sensitive, even poetic response of the teacher. After visiting schools for retarded children in Europe, where such didactic material was in use and had either failed or been abandoned, she stated:

The teaching there was purely mechanical, each teacher following the rules according to the letter. . . . I felt I understood their discouragement . . . and could see why they had in so many cases, abandoned the method. The prejudice that the educator must place himself on the level with the one to be educated, sinks the teacher of deficient into a species of apathy. He accepts the fact that he is educating an inferior personality, and for that very reason he does not succeed. Even so those who teach little children too often have the idea that they are educating babies and seek to place themselves on the child's level by approaching him with games and often with foolish stories. Instead of all this, we must know how to call to the *Man* which lies dormant within the soul of the child. I felt this, intuitively, and believed that not the didactic material, but my voice which called to them, *awakened* the children.¹

To "call to the Man in a Child" is not a casual statement, it is the *summa poetica* of a posture that is beyond pedagogic science. It suggests those possibilities in the realm of personality where intangibles collide. To think of the child as a *man*—not *potentially* a man—is a distinction that must be

felt: for it has to do with attitude. Such a view, Dr. Montessori argued in *Spontaneous Activity in Education*, implies a coherent image of man, one in which the child is seen as a being who aims "to live by means of the things around him . . . to work himself, to aim at some intelligent object" and thus "to construct a Man," but because he *is a Man* he must have the liberty and freedom of his own autonomy, "for his own spontaneous growth." (p. 11-19)² Was she not defining one of the major inquiries of our present time: to discover ways of releasing and developing the multiple dimensions of the human potential embodied, for example, in the studies of the Center for Cognitive Studies at Harvard, The Institute for Developmental Studies of the New York Medical College, of Combs, G. Murphy, Rogers, and others?

In this context the responsible question for the school is how to help this child reduce the chaotic external world to one of internal order? In each personality, Dr. Montessori stated, "we must recognize two parts: one is the individual, natural, spontaneous activity by means of which elements may be taken from the environment wherein the personality may be elaborated internally, constructed and augmented, and hence *characterized*; another part is the external instrument with which all this may be done," the content of the environment. (pp. 111-113) To ensure growth in the child, for growth comes through and by *order*, Dr. Montessori prepared the environment in a definite manner, and through this environment *offers* the child those external means she felt were directly necessary for *him*. She broke the lockstep of the

¹ Montessori, Maria, *The Montessori Method*. Cambridge, Massachusetts: Robert Bentley, 1964. pp. 36-37.

² This and all subsequent page references refer to *Spontaneous Activity in Education*.

graded classroom with her method of auto-education, permitting each child to progress from one level of complexity to the next. These methods she described in detail in her two books *The Montessori Method*, for children 3-6 and *The Montessori Elementary Method*, for children 7-11.

Dr. Montessori had much in common with Rousseau in attitude, but felt he gave voice to "impractical principles and aspirations of liberty for the child" without an experimentally determined means of development (method) that would lead the child to learn spontaneously. We might digress for a moment to Rousseau in *Emile*, commenting on Locke's methods for teaching reading by means of a "bureau" and "dice." He said "What a fine ideal And what a pity! . . . There is a better way and it consists in the desire to learn. . . . Arouse that desire . . . and you have done with your 'bureau' and your 'dice' . . . any method will do." But for Montessori not *any* method would do. Instruction was certainly not a cause; it was the object of the method, which as reagent provokes special psychological reactions; an awakening, a spontaneous organization of the personality: self-learning, self-knowledge, self-discovery. Not only is the child free to select the didactic material that interests him, he is free to proceed at his own pace in "a prolonged and absorbed activity."

There is another function necessarily inherent in the material—"the control of error . . . the power of evoking the effective collaboration of the highest activities (comparison and judgment)." (p. 75) Dr. Montessori, however, stressed the point that what incites the progress of the child is not just his curiosity in the object or the solving of a problem but the acquisition of new powers of perception, which in turn

become the entrée to the *spontaneous*. He then turns his attention to the external world and observes it with the order he has established *for himself*; he begins to discover "a series of careful and logical comparisons which represent a veritable spontaneous acquisition of knowledge . . . discoveries which evoke enthusiasm and joy in the child." (p. 77) If the didactic material is insufficient in its capability of leading the child to levels of assimilation and accommodation there will be "no explosion of that spontaneous phenomenon of abstraction which is the second stage of an auto-education advancing in infinite progression." (p. 79) The external material, which is predominantly sensori-motor for the young child, is the terra firma necessary for flight, and to fulfill this purpose it must contain new and complex challenges. It is very similar to the graded equipment and educational toys found in our nursery schools, kindergartens, and self-teaching environments. *Discipline*, as the result of an order being established within, is the "external sign" of the learning process that is taking place. *Liberty* begins when the child, in contemplation, (and she places great emphasis on the need for periods of uninterrupted contemplation; these are the periods of discovery) "studies himself in his own productions." (p. 104) To ensure, therefore, the continuance of the urge for mastery and competence and the development of personality (self-hood) it is essential that some real task be performed each day.

To create an environment that respects the child's liberty demands more than the careful fabrication of didactic materials and a better method; it demands without question that the preparation of the teacher be made *ex novo*. From this special preparation, which is described in Chapter 4, what kind of

a teacher is expected to evolve? "Instead of facility in speech" she acquires "the power of silence; instead of teaching, she has to observe; instead of the proud dignity of one who claims to be infallible, she assumes the vesture of humility" and patience. (p. 131) As with the children, the eager and absorbing quest of the teacher for truth comes through the task of rigorous observation developed by practice. Such a goal might raise the question of how well we train our teachers to see and to listen and to think and to feel *with* the children, but, I would add, with an openness that reveals not only the self-perceptions and modes of learning behavior of the child but her own coping patterns that function in her encounter with the stresses and joys of the classroom. For Dr. Montessori the scientific attitude is far above mere mechanical skill; the scientist is at the height of his achievement when the spirit triumphs over the mechanism. She affirms, "As in the child internal *coordination* is the point of crystallization . . . so in the teacher interest in the phenomenon observed will be the center round which her complete new personality will form spontaneously" and her social importance as a teacher will be understood. (p. 128-131)

The key to paying attention—that cry of despair of so many teachers in our schools today—is *the sense of dignity* which the child acquires through a discerning interest in an environment of work which *he himself dominates*. (Is this the competence motivation theory of R. W. White?) For it is through this absorption in the task, Montessori notes, that the child learns to eliminate fruitless impulses, to make decisions, and to select educated habits of work that will stand in sharp contrast to the uncoordinated impulses and chaotic acts of the bored, anxious,

disorderly child. Persistence and will power can only be nurtured in an atmosphere where the child is given extended periods for work and concentration; where the teacher does not interrupt to take him from reading to mathematics, but "protects the expansion of his powers" through the recognition of the correspondence between the needs of the child and the manner in which these needs are being met. Here is a Herculean challenge to the creative teacher and curriculum designer, and particularly in those classrooms where for many of the children there is a precarious balance between uninhibited but controlled attention and sullen withdrawal or destructive impulses.

At this point, a personal reference. The most striking impression that I took away from several days of visitation and conference in the Montessori Schools in Perugia and Rome in 1961, was the confidence, freedom, self-discipline, and dynamic occupation with tasks that I saw in groups of approximately 25 children ranging in age from 3-6, or 6-9, or 9-12. Provided with a variety of structured materials, freedom to select and explore the possible insights inherent in them, these children handled, constructed, reconstructed and sought out patterns of meaning in an atmosphere where there were few limitations of time and unvarying compliance to all doing the same thing at the same time. Some worked alone, some in pairs, some stopped to watch another child or group, to ask a question or offer an idea. It was the whole-hearted involvement of the children that caught and held one's attention; I often found myself seeking for the teacher as the source of authority.

It is the sensori-motor materials, which in fact analyze and represent the attributes of things, that first "awaken

and set in motion" the intellectual development of the child. In presenting these materials as structured learning episodes, the teacher is warned against describing the object as an accumulation of facts, details and images, on the assumption that from all this the child will be able to abstract and organize basic concepts and understandings. She is instructed to present each new acquisition of knowledge with a word. For example, in teaching colors, she says, "This red. This is blue" followed by "What is this?" or "Show me blue". Now the child is ready to work with the colors by himself, at his own pace; sorting, matching and identifying. Later he will be directed to the degrees of gradation or other more complex attributes of the object—choosing, identifying, comparing, classifying. Each acquisition of knowledge is not merely stored but duly allocated, thereby adding a cognition to what at first was a primitive impulse. There is a close similarity to Piaget's second stage of intellectual development in the child, the stage of concrete operations: actions by which one internalizes data about the real world and transforms it for use in the solution of problems. For, according to Montessori, the known is first established *by the child* as a complex system of ideas; a secure order, actively and attentively structured by himself. From this base he then is able to make further connections with his external environment. *In his own time* he will discover that his shirt is red, the door is rectangular. *This is intelligence*, Dr. Montessori declared. (Chap. 7) She offers food for thought to the teacher who makes the common statement, "This child just cannot learn," raising possible questions: Is the child's difficulty due to his inadequate understanding of the prerequisite concepts, or the complex relationships among the attri-

butes? Was provision made early in his school life that afforded him opportunities at various levels of difficulty to test his understanding of those concepts that he brings from his out-of-school environment (and these are many, today) and those that he acquires in school?

In a teaching strategy that gives the individual the responsibility of transforming information into new insights, what is the role of creative intelligence? Truth and reality is the true basis for imaginative creation, she affirmed. It "is not the unbridled divagation of the fancy among images of light, color, sounds, and impressions: but it is a construction firmly allied to reality; and the more it holds fast to the forms of the external created world, the loftier will the value of its internal creations be." (p. 248) Sensory education helps the child to collect from the external world his material for the imagination, but "the fancy which exaggerates and invents coarsely, does not put the child on the right road" (p. 254). But I question whether nonsense verse, fantasy, fairy tales do not help the child to separate the real world from the unreal? One cannot quarrel with the child's need to sensitize himself to the fascinating world around him, and from which he will acquire a wide range of experiences and understandings to be organized into a structured form. But where does Dr. Montessori find a place for the restless, curious mind that seeks new possibilities and pries into the many divergent ways of knowing, the mind that uniquely reveals the content of its private world of feelings, emotions and naive ideas? Where is there room for the rebel to pursue his *own* flight into unprepared realms? What I fear is the narrowing of the formative mind to the limits of what seems to be a single perspective. Is there danger that in a tight-

ly prepared environment the child may be over-sheltered from the stimulations and conflicts of his existent world? Will he fail to have the courage and the ability to readjust to new experiences as surroundings change? Rather than turning outward to seek a new meaning schema, will he turn toward the stable and the familiar?

What importance is given to the interpersonal relations of the group, to the development of social intelligence that comes from the sharing of the joy of one's experiences through dialogue rather than mere description, from the insights gained from different points of view, from the social responsibilities of planning and decision making, from respect of one's peers? Is her approach receptive to openness? Does it allow for responsiveness to the cues presented by life itself, by the usages of symbolic media and by the connections that come from within and without that characterize the uniqueness of each child, not each becoming that MAN 'writ large' in the generic sense?

The Montessori Elementary Material is a teaching manual for the education of older children 7-11 years of age, it focuses on grammar, reading, arithmetic, geometry, drawing, music and metrics (poetry). Much of her materials for teaching mathematics is incorporated, perhaps unknowingly, in the new programs of modern mathematics. In the arts there is little that provides for the aesthetic development of the child that comes from discovery and an awareness of the disciplines and expressiveness of art, music, poetry, dramatic play through the 'making' and participation in a variety of media and activities.

As stated at the beginning of this review, there seemed to be in Dr. Montessori's original confrontation with children a certain intangible quality in

her approach which I termed the poetic. It was this poetic quality that I felt carried her significantly beyond the boundaries of pedagogic science, through an intimacy of pupil-teacher that lent a kind of élan to the children's learning and the teacher's own sense of participation. In her book *Spontaneous Activity in Education*, it is precisely this poetic element which seems to have become submerged by the overwhelming emphasis on the scientific approach mixed with the religious and moral. It may or may not have been done consciously, but where it leads is what is important. We are well aware that the principle of selection is, as she says, "the fundamental necessity which enables us to realize things, to emerge from the vagueness to the practical." (p. 211) However, prior to any selection is the fundamental nature of our wisdom which determines what one selects and what one eliminates. Our bias and compulsions take direction from what we accept as important and of prior importance in our culture. In this context, and with the almost total exclusion of the poetic her selective process would tend, I believe, to circumscribe and limit her meaning of order, liberty, equilibrium, and spontaneity to a single mode of being; a posture, in short, that seriously leans toward authoritarianism. In opposition is the posture based on the poetic, which, by its nature, recognizes a plurality of languages or modes of approach to reality, thus enhancing and welcoming the interplay and fluid participation of people and things. The seismograph of this attitude is perhaps most vividly expressed in her approach to imagination, the spontaneous in art. Sir Herbert Read noted her "unusual degree of feeling" when Dr. Montessori "condemned in violent language children's drawings . . . as monstrous, ugly and

deformed" applying to them "a certain aesthetic standard," the limitations that she herself had placed on reality.³ Our position in a world of tremendous change and indeed the position of the individual in this world must be prepared for a fluidity that is alert and open to change. The question remains: where and when should this preparation begin? One certainty is that without the vital element of the poetic, I believe, we cannot properly choose.

The re-publication of the Montessori books has been well timed, for both educators and parents are deeply involved in gross movements of educational reform. We are hearing much about programs for the disadvantaged child, programs that foster early intellectual development, the prevention of academic failure, structured curricula and self-teaching environments, and guidance for the release of intellectual potency. Many of her ideas are consonant with these problems and controversies, and we have much to learn from Dr. Maria Montessori.

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³ Read, Herbert, *Education Through Art*. London: Faber and Faber, 1943. Pp. 113-114.

LINGUISTICS AND ENGLISH GRAMMAR.
by H. A. Gleason.

*New York: Holt, Rinehart, and
Winston, 1965.* 519 pp. \$7.95.*

Perhaps the most noticeable feature of this book is the extent to which it has been permeated by the insights of transformational grammar. This is all the

* *Editor's Note:* Published after this review went to press. Mr. Jacobs read a draft version that Dr. Gleason described as a "preliminary edition."

more surprising because the three long chapters devoted to generative grammar reveal considerable confusion about the theory, purposes, and, at times, the practice of transformational analysis. However, when Dr. Gleason gets down to analysis of individual constructions in English, the results are impressive.

Dr. Gleason wants this book to serve teachers of English as "a guide book to English grammars . . . a little like a Baedeker (to) be read with two or three grammars at hand." The book is about "the interrelations between linguistics and English grammar." By "English grammar" Gleason usually means the traditional parsing and diagramming of school grammar. Such a work, interpreting linguistics for the now rather bewildered English teacher, has long been needed. But this need is only partly satisfied by the present volume.

The book has three main sections—"Historical Background," "English Syntax," and a miscellaneous grouping under the heading "Points of Contact and Implications." I shall leave discussion of his "English Syntax" until the end.

Dr. Gleason's treatment of the history of English grammar in American public education is easily the clearest and most balanced that I have read. He describes the early American teacher, little superior educationally to the rest of her community, subject to detailed "advice" from the community on what to teach. And "what to teach" included a fixed, almost God-given body of grammatical laws that, despite their occasional lack of relevance to English, were regarded as the core of any education. The comment, "she were an old battle-axe but she really learned us our grammar" represents a once-common view of teaching that still survives. When more advanced preparation came to be demanded of teachers, such preparation was almost inevitably offered exclusive-

ly in literature while grammar, ignored by most colleges, became intellectually moribund. Various approaches such as the "survey of errors," "functional grammar," and the "usage movement" are briefly but usefully described. From the "usage movement," as Gleason depicts it, sprang the work of C. C. Fries, leading to the "New Grammar" initially based on spoken language rather than the written form. Gleason summarizes the equally interesting history of linguistics. His coverage of "Comparative Grammar" and the work of Rask, Bopp, Verner and others is too brief for a topic that is more important for the teacher than, for example, the overly elaborate and not too useful treatment of meter in a later part of the book. Regrettably he does not mention the brilliant pioneering work of the authors of the *Grammaire generale et raisonnee* of Port-Royal (1660) who, both in this book and their *Logic*, carefully discuss the representation of the semantic content of sentences in their underlying strings and various other aspects of sentence structure from a point of view that is clearly transformational.

Unfortunately much of the history is presented as a prologue leading inevitably to the peak of the Bloomfield school, members of which are even now foraging on the frontiers of science. J. P. Thorne¹ has recently commented on the tendency of linguists to rewrite the history of their subject in this way. As he points out, the interest of such structuralists as Bloch, Wells, Harris, and Hockett was in language as organized data whereas the newer school of linguists—Chomsky, Lees, Klima, Postal, Fillmore, and others—are more interested in the organizing power capable of producing the language data.

¹ J. P. Thorne, Review of Paul Postal's "Constituent Structure," in *Journal of Linguistics*, I (1965), p. 13.

They would be more likely to see the Bloomfield school as part of a larger movement in philosophy and psychology and most of the sciences, a movement called "operationalism" in the physical sciences, "behaviorism" in others. This movement rejected mentalistic explanations of external phenomena as too subjective and substituted a discipline recognizing only directly measurable or recordable phenomena and organizing a careful taxonomy. Operationalism in science is now a dead letter, but the parallel influences of Wittgenstein and Quine are still strong in philosophy while Hull and, in an even more extreme way, Skinner are influential though controversial figures in psychology. In linguistics the monotonous arguments over where to make "cuts" in immediate constituent analysis seemed for a while to be the core of the subject. The newer linguists have brought fresh air into the discipline by reopening older and, to them, more fundamental questions as to the nature of the adult's creative competence in language and the type of initial organization of the mind that enables man to create language. They claim that the concepts of language are not definable in terms of physically-defined properties.

Modern perceptual psychology and modern linguistics should be able to work together to solve these problems. Gleason's book says nothing about this although it is just this kind of depth that arouses the interest of high school students in the study of their native language.

In his initial discussion of Chomsky's work, Gleason fails to realize that Harris's transformations are very different from those used by transformationalists such as Chomsky. Instead, transformational grammar is presented as the attempt of a small group to question the

basic tenets, whatever they are, of linguistics (presumably the structuralist variety) and to re-insert "process statements" into grammar. Gleason presents as very doubtful Chomsky's claim that a grammar without transformational power is incapable of generating certain structures in natural languages except perhaps through a gigantic number of context-sensitive phrase structure rules. Recent research, notably the work of Postal² on the Mohawk language, seems to confirm Chomsky's hypothesis.

Transformational grammar aims not merely at explicitness but at explanatory adequacy. The highest-valued grammar of a language should be able to explain the linguistic intuition of the native speaker. The oft-quoted sentences

(1) John is eager to please

(2) John is easy to please

illustrate very well what transformational grammar tries to do. The native speaker of English understands the relationship of "John" and "please" in (1) as subject and verb. In (2) it is verb and object. A grammar should be able to explain this intuition. And Chomsky does so in his analysis of the deep structures and transformational history of these sentences.

Gleason follows his history of linguistics with a discussion of English grammars ranging from Priestly through Curme to Fries and finally transformational grammar. It is a pity he says nothing about his own favorite "stratificational grammar," which resembles in important ways the work of the transformationalists.

The third section "Points of Contact" discusses language variation, elaborates

five "keys" or modes of language, after the manner of Joos,³ contrasts written and spoken English, and presents awkwardly a very limited discussion of poetic form. What is extremely useful is the very clear but too brief presentation of the changes in English syntax, emphasizing particularly Shakespeare's syntax. As any experienced teacher knows, the typical student has far more trouble with Shakespeare's syntax than with his vocabulary. Gleason's account throws interesting light on contemporary syntax, especially on the English auxiliaries. His account of *do* will be considerably clarified and simplified if *do* is considered as the carrier for that part of the auxiliary called *tense* when *tense* has no other auxiliary or verb to which it can be attached. What he calls "three important uses" for auxiliary *do* are seen to be one. Also useful is the chapter on language comparison which compares Modern English and German with Old English, Old German, and Latin. The discussion of translation is admirable, and the brief comments on style are very interesting, though one part leans far too heavily on Yngve's "depth hypothesis"; the stylistic fault of "front heaviness" is not at all common in English classes.

Gleason discusses grammatical ambiguity as a fault of style but fails to use grammar to explain *why* a construction is ambiguous. His discussion of poetic form would have been enriched by something more than a mention of metaphor. Surely linguistics has more to offer on this topic. We know that animateness is an important feature in English grammar; that, for example, verbs like *admire* require animate subjects whereas verbs like *amaze* take animate objects. Poets break through

² P. Postal, "Limitations of Phrase Structure Grammars" in J. Katz and J. Fodor, (eds.), *The Structure of Language*, (Englewood Cliffs: Prentice-Hall, 1964), pp. 137-151.

³ Joos, M. *The Five Clocks*, Part V, *International Journal of American Linguistics*, No. 22, Vol. XXVIII (April, 1962).

such restrictions as these to create metaphor and it is partly the violence of the infraction that gives the metaphor power. Levin,⁴ Ohmann,⁵ and Thorne,⁶ have done very interesting work on poetry and prose from this viewpoint.

Gleason's final chapter "The Rehabilitation of Grammar" is a strong plea for re-centering the English curriculum around language. He suggests useful ways of doing this and correlating English and modern language instruction.

The heart of Gleason's book, however, and the part which most teachers would hope to find useful is the large section, "English Syntax." This includes many pages of instruction in "parts of speech," diagramming, and "cutting." "Chinese box" diagrams float around between Reed and Kellogg diagrams and derivational trees. Gleason is presenting immediate constituent analysis as a superior and more rigorous taxonomy of the grammatical features of English. Less rigorous as it is, the traditional grammar does not always come out worse here since it often presents insights denied to the rigid immediate constituent analyst who cannot accept the existence of any underlying structure, of any elements "understood." Since straight IC analysis is little recommended now, and Gleason himself presents a more useful approach, there seems little point in burdening the teacher with this analysis. In his treatment of structure relations the author turns to the techniques of transforma-

tional grammar but because of his distaste for "process statements" calls the sentence relationships "enation" and "agnation," "Agnation" is close to the Harrisian transformation while "enation" describes sentences with different meanings but the same structure.

With little theoretical justification Gleason develops an unsystematic and unordered set of transformational-type relationships between various sentences and then goes on to present some unnecessarily clumsy "generative" grammars in so complicated a way that few teachers—and not many linguists—could follow. He carefully differentiates "generative" and "transformation." Generativeness demands explicitness, he says. Again there is little point in making anyone work through so-called "generative" non-transformational grammars. It only confuses the reader. Linguists evaluating phrase structure grammars might test their explicitness and rigor by putting them in generative form. The presentation of "generative-transformational" grammar is equally clumsy and complicated, justifying the author's strictures on this kind of grammar.

Gleason's conclusion is that the one great advantage of a generative statement is explicitness but that this is achieved at the cost of complexity. But "generativeness" is simply a format for linguistic rules whereas transformational analysis embodies important hypotheses about language. These hypotheses are the ones that need to be discussed, not the superficial question of generative format. Unhappily, teachers may take this author's treatment as definitive and undistorted.

Gleason concludes his study of English syntax with what seems to be his present answer—a study of clause patterns together with some very informal transformations. As one might expect,

⁴ Levin, S. "Poetry and grammaticalness." *Reprints of Papers for the Ninth International Congress of Linguists*, (1962).

⁵ Ohmann, R. "Generative Grammars and the Concept of Literary Style," *Word*, Vol. 20, No. 3 (1964).

⁶ Thorne, J. P. "Stylistics and Generative Grammars," *Journal of Linguistics*, Vol. 1, No. 1 (1964).

the Gleasonian compromise does not work as well as a proper transformational framework. Achieving a synthesis is very difficult and not always profitable. The insights revealed here should be very useful in a more carefully organized framework whether stratificational or transformational.

Linguistics and English Grammar then is only a partial success. As a presentation of a new kind of grammar the book is a failure. But in other respects the book can be used profitably by the teacher both for practical classroom use and to stimulate a wealth of ideas on how to rewrite an English curriculum.

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PROGRESSIVES AND URBAN SCHOOL
REFORM: THE PUBLIC EDUCATION
ASSOCIATION OF NEW YORK CITY
1895-1954.

by Sol Cohen.

New York: Bureau of Publications,
Teachers College, Columbia University,
1964. 273 pp. \$6.50.

This book, obviously the work of a devoted and diligent scholar, is an anti-model of historical craftsmanship. Dr. Cohen apparently set out with three goals: to chronicle the Public Education Association; to advocate that the history of education be given a central place in studies of the Progressive Movement; and to add redundancy to Professor Cremin's insight by proving once again that "progressive education" was a special case of a more general mood in twentieth century America. He achieves the first goal with admirable precision and stultifying repetition. His argument for the primacy of education in American reform reveals unfamiliarity with the events and institutions of the period and almost irresponsible

amateurishness in applying the techniques of historical analysis. The third goal, which has degenerated into an act of piety among educational historians, is achieved.

These strictures, which defy the conventions of academic book reviewing, must be documented. A few examples can be selected from Dr. Cohen's numerous attempts to make his specialty, education, the most important concern of American Progressives. In his first chapter he declares, "... reformers in New York City . . . turned to the public school as the city's chief instrument for Americanizing the immigrant, and as the city's strategic agency for philanthropic effort and neighborhood reform." (p. 13) This statement reflects ignorance of the efforts of the New York Charity Organization Society (beside which the Public Education Association was a pygmy), the Settlement Houses, and such politicians as Alfred E. Smith and Robert F. Wagner, Sr. Similarly, in order to elevate classroom instruction into a major tool of Progressive reform, Dr. Cohen dismisses the Settlements' commitment to the arts as a "fad." (p. 54) Because the logic of his argument demands that art be merely a means of stimulating immigrant children to do their lessons, he ignores the importance of Culture as a system of beliefs and a way of avoiding more painful issues reformers might have faced. Incidentally, Dr. Cohen's erroneous claim that Settlements "gave priority to Americanization" (p. 12) reveals his ignorance of the sources, primary and secondary, on the subject. Jane Addams, Lillian Wald, and Mary K. Simkhovitch, to name just a few Settlement leaders, were caught between a desire to protect immigrant traditions and the urge to help immigrants adjust to American life.

Dr. Cohen's commitment to educa-

tion makes him unfair to Progressives with different frames of reference. Any reformer who questioned the effectiveness of the Public Education Association was a Bad Progressive. William H. Allen, Director of the New York Bureau of Municipal Research, for instance, appears as a narrow-minded miser who opposed public expenditures for school reform. More familiarity with the Progressive scene might have persuaded Dr. Cohen that Allen was an advocate of coherent public planning who viewed education in the context of the general problems involved in improving the standard of living. Allen, a professional economist, was understandably out of sympathy with "Junior Good Government Clubs" (p. 50) as a remedy for any of the social and economic problems of the Lower East Side.

Dr. Cohen's principles of analysis and organization make his book misleading for anyone without the inclination or the compulsion to read every word. In the first chapter, he quotes without comment the 1896 Public Education Association report, which declared that the school system had not "adapted itself to, or conquered" the "peculiar environment" of the immigrants. (p. 4) The reader must wait one hundred and eighty-two pages to learn that Dr. Cohen is aware of the ambivalence in this statement—that he is sensitive to the tension between pluralism and Americanization. In the same way, it is necessary to read three-fourths of his book before learning that the leaders of the Public Education Association were mainly concerned with preserving the social *status quo* and that the stuffed-shirts and pigeon-breasts who made so much noise about education in New York sent their own children to private schools. In short, despite his frequent allusions to something called

"progressivism writ large," Dr. Cohen has chronicled the obtuseness of New York's White Anglo-Saxon Protestant minority and their German-Jewish allies. I suspect the Public Education Association richly deserved every licking it took from the more humane, if less respectable, proprietors of Tammany Hall.

The author's unpleasant prose creates analytical as well as aesthetic discomfort. What does he mean when he describes Jacob Riis as "typical" of reformers? (p. 8) Since Dr. Cohen never defines the word "progressive" with precision, the phrase "in the progressive fashion" (e.g. pp. 54-55) is a handy pseudo-generalization whenever he remembers that it is now fashionable to relate every event of the period to an ism written LARGE. Less important are such grotesque expressions as "motives . . . which motivate," (p. 25) "In one of the first fruits," (p. 38) and "Homage" which "holds up." (p. 62) It is a depressing—and apparently unconscious—caricature of a pressure group with a \$45,000 annual budget to describe its "journey to Canossa."

Despite the sour tone of this review, several interesting and suggestive points buried in the book are worthy of further study: the relationship between doubts about the abilities of immigrant children and the development of vocational education; the influence of educators and educational reformers on the rationalization of techniques for individual casework by social workers; and the smothering of the promising relationship between social work and education in the embrace of "progressive" education.

The burden of blame for the faults of *Progressives and Urban School Reform* should rest less on Dr. Cohen than on Teachers College, which awarded his degree and published this book. The

historical profession will be intolerant of education-school trained historians as long as they persist in publishing as books undigested masses of quotation and repetitive comment—the raw materials for the tightly constructed essays which qualify most historians to pass beyond their apprenticeship.

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YOUTH IN THE GHETTO:
A STUDY OF THE CONSEQUENCES OF
POWERLESSNESS AND A BLUEPRINT FOR
CHANGE.

Harlem Youth Opportunities
Unlimited, Inc.
New York: HARYOU,
180 West 135th Street, 1964.
620 pp. \$4.50.

Several years ago I was engaged in setting up an international conference on the psychology of adolescence with particular reference to the socially adapted for UNESCO. In preparation for this meeting, I visited a number of countries, including Israel. I was much impressed with what I saw going on in this new and compact country by way of joint study, planning, and action on the part of the behavioral scientists and lay citizen groups in the solution of social and educational problems. I thought, "If the behavioral scientists have anything to contribute, it will show up here!" I have the same feeling after studying the HARYOU report and blueprint for understanding and helping Harlem youth.

This detailed and documented step-by-step account indicates how local community groups acting within the framework of the Harlem Neighborhood Association (HANA) were determined that a meaningful program for

Harlem youth would be evolved, both in its planning and its program stages, via those agencies and groups which were indigenous to the community and which had responsibility for day-to-day work with youth, including youth themselves. The report spells out the various strategies of planning, it provides a detailed picture of the Harlem community and its schools, it presents various designs and programs for inducing change, and it concludes with a postscript on research and evaluation. In short, this document provides a good model of the use of knowledge both at the level of theory and at the community level as a basis for program planning without the usual capitulation or surrender to outside professionals.

The HARYOU effort is aimed to help all Negro youth, but repeated all-inclusive references to "Negro youth" and "Harlem youth" as the target group demand a comment. Except for an occasional reference to degrees of deviancy on a behavioral scale or the use of the class status label, the report fails to differentiate adequately among variegated youth found in the spectrum of Negro population that are jammed together in the same neighborhood. The implied homogeneity from neighborhood to neighbors in the constant reference to a monolithic Negro youth limits the study somewhat. The approaches taken with middle-class, upwardly mobile lower-class, or the paralyzed lower-class youngsters will demand even greater differentiation than is visible in these efforts.

Of special interest to the educator will be the many harsh and hard-to-take references to the school agency as bogged down in futility, pretense, or bankruptcy or even as an alibiing agency, if not a downright rejecting one. A few random quotes should chill even the more hardened inner-city edu-

cator. The report states: "Schools devote a great deal of attention to developing seemingly satisfying explanations for the lack of educational efficiency." (p. 22) Concerning the young Negroes' disenchantment with school: "they explain their disaffection with school in terms of the physical and psychological brutality of teachers." (p. 17) A Harlem teacher bluntly points out: "Non-Negro teachers in the Harlem Schools are inferior" and that the schools serve as a "dumping ground for condemned white teachers." (p. 235) An appraisal of education in Central Harlem reveals the school locked in an educational bind in which "the schools have lost faith in the ability of their pupils to learn and the community has lost faith in the ability of the schools to teach." (p. 236) The major reason offered as to why Harlem pupils fall so far below their grade level and why this gap widens the longer they stay in school is that "substandard performance is expected of them." (p. 237) Summarizing, the authors state: "The basic story of academic achievement in Central Harlem is one of inefficiency, inferiority, and massive deteriorating." (p. 166) To paraphrase St. Matthew, it is easier for a camel to go through the eye of a needle than for a poor Negro youth to pass through a Harlem High School.

The HARYOU report, in spite of this terrible reality or because of it, reassures us that it may still be possible to mobilize the resources and the power of in-school and out-of-school education so that the subtle and flagrant forms of racial discrimination that dehumanize and victimize Negro youth can be overcome.

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COMPARATIVE EDUCATIONAL SYSTEMS.

by Arthur H. Moehlman.

Washington, D.C.: Center for Applied Research in Education, 1963.

105pp. \$3.50.

In his excellent book on comparative educational systems, Arthur H. Moehlman quotes Abraham Lincoln's famous saying: "If we could just know where we are and whither we are tending, we could better judge what to do and how to do it." (p. 82) He uses this quotation in connection with his belief that "every civilization must pursue excellence in its educational system as the best guarantee of its own survival and progress" and must "engage in the intelligent improvement of all the major components of its educational system in order to gain excellence." (p. 82, my italics) Grouping these components into three major categories: *orientation*, including philosophy, law, finance; *organization*, including general structure, pre-elementary, elementary, secondary and higher education and mass media; and *operation*; including students, teachers, curricula, methods of instruction, instructional materials, evaluation and testing, guidance, supervision and administration, Moehlman further states that the orientation of a nation or culture is essential in determining the success of its educational system, and that orientation includes the philosophical world picture controlling the aims and objectives of its pattern of education.

Education is a function of society; it cannot on its own create a new society. Educational methods have their own philosophy, their own trends, but they are influenced by the philosophy, the experience, and the trend of the environment in which and for which they work. Educational systems reflect the

ideals, hopes and aspirations of their environment. From this point of view, comparative education can contribute to a clearer insight into the problems of education of other countries and of our own educational problems, if the student of education is able to recognize the important influence upon education of the respective social, economic, cultural, and political backgrounds. Such an approach has become all the more necessary at a time when education is more than ever a concern of the whole nation.

The study of the principles of geographic, historic, social, economic, and political development is the best approach for the understanding of the educational system of a nation. By comparing these with the principles governing those same developments in other countries as well as our own, we will learn to put to better use the knowledge on which to base the foundations for our own educational aspirations.

The average citizen is hardly aware of this interdependency. But it is of great importance to education that the citizenship of a democratic country knows about this interdependency of school and society, and Dr. Moehlman's book, written for and very useful to the educator, should also be used, in this reviewer's opinion, by people who talk to parent-teacher organizations, or work in adult education.

It is absolutely surprising to see how much Dr. Moehlman was able to discuss so splendidly in a book of only 105 pages. No doubt the student of school systems in European, Asian, African and American Culture areas would like to know more specifics of the educational problems in the countries described, and more of countries other than those discussed; but this is obviously not the purpose of the book.

Chapter I "describes the major factors determining the primary characteristics of educational systems and the problems of formulating a cultural morphology essential for comparative studies of the main educational trends emerging within each system. Chapters II, III, IV, and V deal with case studies of the impact of these long-range factors in various cultures upon specific educational systems, and with the significant characteristics developed in the process. Chapter VI investigates the main trends in educational development with regard to orientation, organization and operation. Chapter VII examines paramount issues facing all educational systems under the impact of long-range factors affecting their pattern of educational growth and which must be coped with effectively." (pp. 1-2)

Dr. Moehlman, has presented enough facts to enable the reader to follow his thinking and the way the conclusions are drawn from the facts. Nevertheless, I would like to draw attention to the fallacy of one statement from the objective point of view of comparative education, and to one omission of an important contribution to a better understanding of comparative education. The first is a statement by the author about the democratic universal orientation which the United States tries to give its education. On the other hand, according to Dr. Moehlman's point of view that "orientation (of educational systems) includes the philosophical world picture controlling the aims and objectives of its pattern of education," we cannot expect anything else from education in communist countries than what we have to expect from communism itself. We, therefore, should *not* be surprised that

Communist education has become a dangerous, reactionary and menacing force in the world because it is attempting to arrange the future of the world according to images of the past . . . and the use of force and conformity to engage in the destructive struggle for survival rather than engaging in the mutual aid and constructive interchange of technology, education and economics so essential to constructive acculturation. (p. 85)

Educational theories and practices cannot be transferred from one country to another. The essential contribution of comparative education is to emphasize the importance of the study of all factors which made the education of a country the kind of education it is. It is not the function of comparative education to determine whether one school system is better than another one, nor have any standards yet been developed for such determination.

It is not enough to compare the components of educational systems with regard to orientation, organization and operation. Otherwise, one must also ask: How well do these components in their integrated form or gestalt enable nations to solve the paramount issues perennially raised by the operation of the long-range factors making up the various sectors of the nation's culture? (p. 94)

We could, perhaps, say that every society has the education it needs and deserves. But no society has only one or another criterion for its educational needs. It is no matter for such criteria whether this nation or another one had the first Sputnik in orbit. The "strategy of education," as Moehlman calls it, is dependent upon the "national style" of a people. Could anyone ever believe that we would sell our liberty or democracy for one or two Sputniks? Certainly, the defense of our liberty, our democratic rights, might have to be defended by Sputniks and other not so conventional weapons. But there would soon be nothing left to be defended if we were to change our democratic educational system into an authoritarian one, even if the latter seems to be more "efficient" in some respects than our own system.

The future of the world is going to be determined by conflict or cooperation between masses of people. Those masses will be successful which clearly understand the orientation of their educational system toward a philosophical world picture, and who structure and organize and operate their educational systems to obtain these goals. (p. 86)

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A philosopher discusses two divergent views concerning the basis of morality, and explores the implications of these views for the problem of moral education.

ALAN MONTEFIORE

Balliol College, Oxford

Moral Philosophy and the Teaching of Morality

It may very well be asked what moral philosophy has to do with teaching morality at all. What could a moral philosopher possibly have to say on the subject? Why should he *want* to say anything? Is it not true that many contemporary linguistic and analytic philosophers have gone out of their way to disclaim any special competence or professional interest in this field? They seem almost to have made it a matter of honor to have detached themselves from any direct contact with the practical issues of life. So all that one could reasonably expect from a contemporary moral philosopher writing under the above title is yet one more explanation of why the public is (or at any rate used to be) sadly mistaken in looking to him for any relevant contribution to the problems of moral teaching; and if older philosophers—or Continental philosophers—thought, or think, otherwise, this only goes to show how confused they were, or are, about the proper nature and objects of their trade.

Actually, this would not in general be a fair account of the position of even the most analytically inclined of contemporary philosophers. Many of them do, certainly, stoutly maintain that their job as philosophers is necessarily limited to explaining the nature of moral arguments (in the sense

of showing what people are arguing about—or ought to be arguing about, if only they were clear-headed enough) or the meaning of moral concepts, such as “right” and “wrong,” “virtue” and “vice,” “conscience” and “responsibility,” and so on; and they maintain, too, that their explanation of what is at stake must always stop short of taking sides in the battle. (That is to say, that they cannot take sides *qua* philosophers—what they may do as citizens or men is, of course, another story.) But it is interesting to see how some of them—who may in fact be men of deep moral commitment—try to have it both ways, as it were, and to argue that just to be clear about the meaning of moral terms and about the nature of moral argument may after all have an incapable impact on the moral positions that one can in practice take up. Moreover, there are now quite a number of analytically trained philosophers who are increasingly doubtful of this doctrine of the moral neutrality of moral philosophy. So it is, on one count or another, by now distinctly wide of the mark to suggest that contemporary analytic philosophers are all firmly united in insisting that moral philosophy has nothing to do with morals.

Still, it is not all that easy to say off the cuff just *exactly* what it may have to do with the teaching of morals. Nobody could reasonably pretend that moral philosophers bear any more distinguished moral characters than other men; nor that they have clearer or more definite opinions on what is right and what is wrong; nor, where they do have opinions, that these are, as the opinions of philosophers, any more likely to be right or generally acceptable. Moral philosophers are in general no better equipped as moral educators than anyone else: they have no special qualifications to tell people what they ought to do or how they ought to behave. So what is the relevance of what they may have to say?

One short answer to this question is that a moral philosopher might not unreasonably hope to be able to help people whose business it is to inculcate standards of morality and to train moral character, to understand more clearly the nature of what they are doing and to set in clearer perspective the aims which they may pursue. This may not sound very exciting; but clarity in such matters is, of course, no little or easy thing. Without it, it is hard to know what is worth attaining or how best to set about seeking to attain it. Moreover, though it may sometimes happen that a muddled teacher is a positive stimulus to his or her pupils, more often muddle simply reproduces muddle. Perhaps this may not always matter; and no doubt there is a sense in which it is true that inarticulate example may be worth more than ten times as much as the most highly articulate precept. But one can only afford to rely on this when one is sure that the example is going to be understood as an example of what one wants to be understood. And it is important that some people should at least sometimes ask themselves what they think this is.

However, although I think that the short answer is right so far as it goes, I do not believe that it quite succeeds in being a complete one. I do not think that there is in principle only one unrestrictedly "correct" clarification to be provided of many of the central issues that must face anyone who thinks about moral education. I think that the way in which one seeks to give or accept such clarification may itself have an important bearing on one's understanding of the proper aims of moral education. And although I do not believe that one's approach to clarification can have any *direct* implications for the kind of behavior that one may wish to recommend in particular situations, the approach may well, I think, have its implications as to the type of person that one may seek to produce.

* * * * *

What sort of thing is it that you are wanting to do to people, or to make of them, when you seek to educate them to a sense of moral values? I do not mean this question to be one about the detailed provisions of the moral code that you might wish to see them adopt: about whether, for example, you are trying to instill into them a spirit of patriotism or of pacifism; whether you want them to adopt strict rules of premarital and extramarital chastity; whether you feel that they should always place filial obedience near the head of their list of obligations, and so on. I mean to ask rather: Do you feel that a man or woman has reached full moral maturity only when he or she has learned to take full personal responsibility for every decision of principle, for every value by which he or she determines to live? Or do you think that there are certain authorities in matters of morals? Do you think that a central moral lesson—perhaps the basic one—is that of a certain obedience to something or someone other than the individual's own elective will? And if so, obedience to what sort of authority? To the needs of society? If so, to these needs as measured by whom or by what standards? Or to the teaching of a church? Or to some less personal but still objectively determinate principle, such as that famous Utilitarian demand for the Greatest Happiness of the Greatest Number?

It is clear that whichever sort of answer you give, all sorts of difficulties, both practical and theoretical, will remain. It is clear, too, that people with very different overall views of the ultimate purpose of moral education may nevertheless find a considerable overlap in the methods they hit upon to pursue their different ends. All the same, one's conception of the ultimate aims and nature of morality is almost bound to have some impact on the framework within which any form of practical moral education, formal or informal, may be undertaken. If you see morality as essentially the concern of the

free, autonomous individual, that is one thing; if you see it as essentially a certain type of acceptance, that is very much another. And although everyone may have his own order of preferences, in the first case, as to what these moral individualists should in their freedom choose as their guiding standards, there remains a fundamental difference between teaching people that they must in the last resort take over the full responsibility of working out their own moral standards for themselves and, on the other hand, teaching them that they must in the last resort learn to accept some other authority as ultimate. To repeat: this may not in the short run lead to any differences in the practical exhortations to be given and in the practical examples to be set; differences may, but need not, come in the details of obligations and duties, of observances to be fulfilled and of behavior to be avoided. But there are bound to be wide differences of general attitude—differences of a sort that may in some situations be almost too general to be noticed and in others so pervasive as to color even practical agreements with a sort of overall haze of discord.

Where might philosophy come into this matter? For the sake of brevity, I propose by way of example to concentrate on one major division among these various ranges of opinion: the division between those who think that all true morality must in the last resort spring from the free and deliberate decisions of mature and responsible individuals and those, on the other hand, who see it as resting on whatever external norm or authority. (By "external" I mean roughly "going beyond the individual and in some way confronting him as a fact which he must discover and with which he must come to grips," whether such facts are thought to relate to the opinion or decision of some authoritative Being or institution or rather to some impersonal and universal standard implicit in human nature itself.) Many very important differences exist between people on either side of this fence. But for immediate purposes there is no need to go into these; for the moment, and for the further sake of convenience, it may be enough simply to take over the common labels by which those who argue as individualists may be called Autonomists, and their doctrine the Autonomy of Morals, while those who oppose them may be called Ethical Naturalists or Descriptivists. Philosophy may now be said to come into the matter as the systematic struggle between those who believe on either side that the case for Autonomy or for Naturalism (or Descriptivism) can be settled not just on the basis of one's own moral preferences, but on that of conclusive logical argument. Or to put it in a slightly different way: philosophy comes in either with the arguments of those who think that it is actually possible to prove as a result of clear-headed reasoning that morality in its true sense is necessarily a matter of individual decision, or with the arguments of those who think that it is possible to prove the reverse.

THE AUTONOMIST ARGUMENT

We will look first at the case for Autonomy. In brief, though perhaps not entirely clear and only semi-technical terms, it can be summed up as the doctrine that it is never possible validly to derive any genuine moral judgement from premises that do not themselves at least implicitly include a moral judgement among them. From this, and if one makes one further assumption, it follows that no matter what the facts may be, nor what definitions may be introduced, no one can be logically compelled by his acceptance of facts and definitions alone to adopt any particular moral position. The further assumption is simply that it makes no sense to talk of peculiarly moral facts with an independent status of their own. This is, of course, an important assumption and not everyone would make it. G. E. Moore, who was responsible for introducing the not very suitable term "naturalism" into this context of argument, was a convinced objectivist—at any rate, at the time when he wrote his main work on moral philosophy. But though he undoubtedly thought that values had their own independent status, he at the same time argued that since "good," the fundamental concept of ethics, is unanalyzable, any attempt to derive ethical conclusions from non-ethical premises must for that reason turn out to be fallacious. Moore originally thought that all other ethical concepts could be defined in terms of "goodness." Other objectivists have held that "goodness" and "obligation" were equally primitive and indefinable, and hence maintained a version of the "no-ought-from-an-is" doctrine within the framework of ethics itself. Objectivists such as Moore or, for example, Sir David Ross, would thus certainly have counted themselves as non-Naturalists or Autonomists in the sense that they would have denied the possibility of deriving genuine moral judgements from premises that do not themselves include a moral judgement among them; yet it is clearly part of their doctrine that he who has it in him to recognize the facts of morality for what they are must find his moral position effectively determined for him. I do not here wish to argue against this form of objectivism, but rather dogmatically to assume its unacceptability. And if all such talk of independently moral facts is ruled out as senseless—as the great majority of philosophers would nowadays rule—it would indeed follow from the doctrine of Autonomy that no one can be logically compelled by his acceptance of facts and definitions alone to adopt any particular moral position.

Put like this, the doctrine of Autonomy may sound formal and somewhat remote. But it is, if correct, destructive of any idea of absolute moral authority. The reasons for this may be indicated as follows: Consider a problem of morals from the point of view of some particular individual. First of all, he must try to get clear about the exact nature of the problem situation; that is,

he has to get clear as to the facts. Then, he may ask what most people, or his society, would say—or what would generally be regarded as his duty in his circumstances; but the answers to these questions lie likewise in the realm of facts—facts about society, facts about what others may think. Next, he is confronted with all sorts of urgent exhortation and advice; but other people's expressions of their views merely provide him with further facts about them and about what they want, hope, fear, approve or think. Even his own feelings are to be recognized by him as facts about himself. In short, there is nothing which people can say to him by way of making known to him their views or the views of whatever they take to be the most relevant authority, that cannot be represented as being among the facts of his situation. But from the recognition of the *facts* of his situation, nothing follows, according to the doctrine of Autonomy, by way of a genuinely moral judgement. For that he has to take responsibility in his own individual decision.

It would, actually, make very little difference to its effectively anti-authoritarian, individualist character if the doctrine of Autonomy *were* to be taken in one of its objectivist versions, according to which, among the facts of my situation there may lie my obligations and my duties—as independent of and as authoritative to my own personal will as any other impersonal fact. For even if it is admitted, for the sake of argument, that moral values might themselves be counted as constituting in some way independent facts, who is to say what these so-called moral facts are? The Party or the Church? One's parents or the village elder? After all, the fact that X (whichever would-be authority X may be) says that so-and-so is a moral fact is not itself a moral fact, but only a fact about what X says; and, according to any version of the Autonomist doctrine, from such non-moral factual premises as these, no moral conclusions can follow. Hence, even if there are moral facts, every man must in the end decide for himself by what or by whom they are to be known: which is to say that there can in the last resort be for him no other responsible authority than that of his own independent judgement. Until he recognizes this, any Autonomist may say, he has not yet understood the true nature of morality.

Thus, although the doctrine of Autonomy is presented, and understood by those who present it, as a doctrine about the possibilities and impossibilities of valid, logical argument, it is at the same time a doctrine of characteristically liberal and, in general, Protestant flavor. I do not want to exaggerate the Protestant side of this characterization, nor, indeed, to pretend that it is not possible to give a certain sense to the notion of moral authority within an Autonomist framework. But both flavors are, I think, pretty recognizably there.

It is possible to give a *certain* sense to the notion of moral authority with-

in an Autonomist framework. For in the first place, few contemporary Autonomists at any rate would think that just any decision or preference on the part of an independent individual would count as a moral judgement. Moral judgements are on the contrary very special sorts of decisions. Naturally enough, Autonomists differ among themselves as to the proper characterization in detail of a moral judgement as distinct from any other kind of judgement; and some of these differences are very considerable. But one very widely accepted characterization of a genuinely evaluative moral judgement is that it should be universal in scope: that it should be applicable, and be meant as applying, to everybody alike—that is, to whoever might find himself in a certain repeatable type of situation. However, it is not always by any means easy to tell just what are the further implications of a universal moral judgement of this sort; sometimes the difficulties may be intellectual ones, but far more often they will arise from lack of experience, lack of imagination, or prejudice due to one's own naturally strong interests and emotions. In circumstances of this sort, it may be reasonable to defer to the "outside authority" of someone recognized to be of greater experience, wiser imagination, and disengaged impartiality. And though, of course, each individual must in the end take responsibility for his own choice of authority to be trusted—for his own judgement as to who is to be counted as sufficiently impartial, experienced and wise—still, so far as the more detailed judgements are concerned, he may be prepared to treat this authority as absolute.

Secondly, an Autonomist may quite coherently decide to give his whole faith and trust to some institutionalized or institutionally backed authority such as the Party or Church, priest or section commander, or whatever it might be. To do this is (from an Autonomist viewpoint) like giving a blank check to somebody else, already signed but needing to be filled in on one's behalf with whatever the authority may consider to be the appropriate moral judgements. But once again, the decision to adopt such an authority, as one's decision-maker by proxy or by power of attorney as it were, must be the individual's own. That something—say abortion—is wrong will still not follow from the fact that somebody else says that it is: it can follow only from this fact *together with my own overall decision* to accept what this somebody or institution says and to make it my own.

Thus, the Autonomist *can* give a sense to the notion of Authority; but only on the deeper understanding that Authority itself, if it is to be genuinely moral, must be founded on freely determined consent.

Whether this, as it seems to me, somewhat attenuated sense of "Authority" will still be sufficient for Catholic doctrine is not for me to say. Catholics themselves, of course, may take different views on the matter. In any case, whatever the force of traditional doctrines may be, their interpretation is al-

ways open to change; and certainly distinguished Catholic churchmen may on occasion be found to argue as full-blown Autonomists. Similarly, one can easily discover both Autonomists and non-Autonomists among Protestants. Still, I do not think it unfair to say that this doctrine of the moral supremacy of the enlightened individual conscience is of a more typically Protestant nature. Furthermore, the doctrine of Autonomy is hardly compatible with that of Natural Law, according to which certain values are embedded in the very nature of things, and are there to be recognized and discovered by whoever has the "eyes of reason" to see, but not to be modified in the light of so-called individual standards; and it may perhaps be rather more difficult for Catholics than for Protestants wholly to disentangle their beliefs from doctrines of this kind. (Still, even here one must say "hardly compatible" rather than "totally incompatible"; for there have been attempts to square this circle as well, and much could be made to depend on the exact way in which values are supposed to be embedded in nature.)

Still, however all this may be, my own view is that it is the political (in a wide sense) or social aspect of Autonomist ideology that is the more markedly significant. A society that believes that each man is in the last resort his own irreducibly independent source of moral values is a thorough-going individualistic and liberal society. Liberal with a small "l," of course; and not necessarily particularly humane or tolerant, though one may always hope that liberal society should be so. But certainly liberal in the classical individualist sense; and for better or worse—and it *could* in certain cases be worse—radically anti-totalitarian.

Can the Autonomist actually prove the correctness of his own point of view? To his own satisfaction at least I am inclined to think that he can. The details of his case may vary and may involve considerable complications; it is no casual matter to determine in a sufficiently rigorous manner the proper criteria of logically valid derivation. But it is no part of my present concern actually to try to prove the Autonomist's case; and the main ideas behind his different arguments are perhaps simple enough. They are, to repeat (and dis-regarding Objectivist formulations), that there are clear distinctions to be made between moral and any sort of non-moral judgements; that logical argument can never validly conclude in any assertion that was not somehow or other already implicit in the premises of the argument; that since moral and non-moral are held to be thus distinct, the one can never be derived from the other, unless it was somehow already implicitly there in advance; and that from the non-moral alone, therefore, from the facts of nature or the facts of society, from the facts of one's own emotions or the facts about God and church, no moral judgement is to be derived. Thus, each and every man must decide for himself, whether he likes it or not. To learn to think

morally is to accept the inescapable necessity of taking one's own responsibilities upon oneself.

So much, for the moment, for the Autonomist. His case may well seem a strong one; to himself it will seem invincible. But—it hardly needs saying—his opponent, the Naturalist, of whatever form or variety, may be equally convinced of the evident truth of *his* case and of the absurdity of that of the Autonomist. And the Naturalist, too, can find a good deal to say for himself.

THE CASE FOR NATURALISM

The Naturalist's central contentions may be seen to conflict with those of the Autonomist at almost every point. The Naturalist may or may not think that a man has a certain limited area of independent moral decision—an area within which to decide what is right, not only in the fact-finding sense of "decide" in which I might try to decide whether it was going to rain or not, but also in the sense of "decide" in which I may decide what I am going to do. But he will certainly hold that this area is limited. For him, too, this can be represented as a matter of logic, though "logic" understood a little differently, no doubt. That is to say that there will be certain sorts of judgements which, in his view, could not *meaningfully* be presented as moral judgements: the judgement, for instance, that one had a moral obligation to dance a jig every morning or that it was morally permissible, or even admirable, to torture children on the third of each month. It is true, of course, that somebody might use the word "moral" in connection with judgements such as these; but this would simply be to show that such a man was using it in some entirely different way from that with which we are familiar, in some entirely different sense from that which is relevant here. The Autonomist may present his doctrine as founded on a point of logic; for the Naturalist, it is first and foremost on a point of logic (in a general sense) that the Autonomist is most evidently and profoundly mistaken. To take the Autonomist seriously is to regard him as committed to accepting, as at any rate meaningful, a whole range of allegedly moral assertions that no one in his right or reasonable senses, or with a proper understanding of the language, could regard as meaningful at all. If he claims (as he must) that the fact that a man is torturing a child is logically compatible with the judgement that the man's action is as such morally right, this to the Naturalist can only go to show that it is the Autonomist who has not as yet understood the true nature and meaning of morality.

I have said that the central contentions of the Naturalist may be seen to conflict with those of the Autonomist at almost every point. But it goes without saying that to talk as if there were, broadly speaking, but one type of anti-

Autonomist doctrine involves the grossest of oversimplifications. It would be impossible to try here to go through all of the many importantly different forms which this doctrine or family of doctrines may take. However, there are perhaps two or three very broad distinctions that may usefully be indicated at this stage, the first two of which in fact cut across the Naturalist-Autonomist dichotomy and apply with equal force to both sides.

First, and maybe over-obviously, the differences between Autonomists and Naturalists need have nothing to do with the question of whether it is possible to explain on the basis of the natural or social sciences why people hold the moral views that they do hold. In general, to explain how it comes about that a man holds a given belief need be to imply nothing either about the truth of his belief or about the grounds on which its truth or falsity might be established. Many Autonomists certainly maintain the possibility of providing "natural" explanations of why men adopt the particular moral principles that they (freely) do; vice versa, some Naturalists—or Descriptivists, to give them their perhaps less misleading title—may differ from others in taking what is moral to be defined by reference to the sovereign will of God, and hence beyond natural explanation.

Second, the situation is complicated by the fact that while many Naturalists may concentrate on the notion of morality and on its definition (as they see it) partly or wholly by reference to some other factor than that of the individual's own elective will, others prefer to concentrate on the notion of evaluation in general. Thus Naturalists of this latter variety may see the crucial distinction to lie between individual preferences, purposes, desires, etc. on the one hand and genuine values on the other hand, where the values have to be based on something that confronts the individual as being beyond and outside him. From this standpoint, the non-Autonomy of moral values may be seen as springing not so much from their status as moral as from their status as values; and one may even be allowed to talk of individual (and to that extent non-evaluative) moral preferences or whims. In just the same way, while there are some Autonomists who take the notion of morality as central, there are others who take that of evaluation, and whose doctrine may therefore be more suitably entitled the Autonomy of Values rather than the Autonomy of Morals. (There are also, unfortunately, a number on either side of the fence who sometimes fail to maintain a clear distinction between these two versions of their doctrines.)

Third, and as already indicated, Naturalist or Descriptivist thinkers may vary greatly between themselves in their accounts of how "morality" (or "evaluation") really is to be delimited or even defined. Some would refer to some kind of general consensus, either of society or of some class or segment of society or of mankind as a whole; others to the concept of human nature

itself, interpreted in some preferred teleological way; others to concepts of basic human needs; others again to considerations of a religious or metaphysical order; and yet others to such standard Utilitarian concepts as Welfare or Pleasure or the Greatest Happiness of the Greatest Number. In other perspectives than that from which the present discussion is directed, the differences between these competing (though perhaps not equally plausible) versions of Naturalism may effectively overshadow those between any of them and the doctrine of Autonomy; and on any account of the matter, the differences between them are, of course, of very great importance.

In spite of these differences, however, there is the one central feature common to all these and other versions of Naturalism. If Autonomism is false and the facts of human nature or needs of society or of God may always place limitations on the range of meaningfully possible moral judgements (and sometimes such severe limitations as to leave virtually no choice at all), then the individual is very much less than free to determine his own moral values for himself. And in this case, to teach him the nature of morality must involve teaching him to recognize the directions in which these limitations lie.

It is important to realize that both these sets of views can be represented as views about the *logic* of moral argument and the *meaning* of terms like "morality." That is to say that the situation is not simply one of different groups of people holding rival views as to how one ought to behave. Disagreements of *this* sort, after all, are not only possible but even to be expected among Autonomists themselves; since each Autonomist considers himself and everyone else wholly and irreducibly responsible for determining his own moral values, he will show no surprise that some people should settle on different moral principles than others do. This disagreement between Autonomists and Naturalists of whatever hue, however, is one about the very structure within which any moral thinking or argument is to take place. This is what makes their disagreement a typically philosophic one.

IMPLICATIONS FOR EDUCATORS

What is the relevance of considerations such as these to the problems confronting educators? The fundamental issue, as I have tried to indicate, concerns the *kind* of thing one should be trying to do when undertaking any form of moral education or training; and in some sense or other, this issue must always be relevant. But—although I here pretend to no expertise whatsoever—I should certainly suppose that the practical immediacy of this relevance would depend very considerably upon the age and type of "pupils" with whom one were concerned. It seems clear, for example, that the Autonomist view of morality as springing essentially from the fully self-con-

scious decisions of maturely responsible individuals is one that can only have potential rather than direct application to very small children. There is, after all, a sense in which we must all start off as little Naturalists by learning our moral values as if they were facts.

Indeed, the Autonomist's conception of morality is in this way a peculiarly sophisticated one. The goal that he sets himself must be to bring children up to think and to decide for themselves as fully autonomous individuals; but meanwhile he will want somehow to prevent them from going altogether off what he himself would regard as the minimally acceptable rails. He is faced, therefore, with some rather tricky practical as well as theoretical problems; and up to a point, no doubt, these problems would tend to increase and to become of more direct urgency with the increasing age of his pupils or students (though this does not mean that they must not already exist in a more or less latent form from the very beginning).

So the basic issue is both educationally relevant and typically philosophic. Nevertheless, the situation is not one in which educators can simply go to philosophers in order to receive from them some professionally agreed-upon clarification of the nature and meaning of moral thinking and hence of the true goals of moral education. Faced with such systematic disagreements between the philosophers themselves, educators can hardly look to philosophy, at any rate not in its present state, to provide them with answers ready made and easily recognizable as definitive. It is nearer the mark to say that those educators who find themselves driven to work out the basic rationale of what they are or should be attempting in the field of moral training are already having to think philosophically for themselves. The most that they can expect from philosophers is that they may be able to help them in this endeavor.

But what sort of help? Help first and foremost, perhaps, in making the conflict explicit. This is already of no little importance. Where morals are concerned, it is only too easy to take the presuppositions of one's own evaluative framework for granted, noticing neither that they may be internally inconsistent nor that they may differ radically from the assumptions of others. In this way communication may be befogged and mutual understanding ruled out from the beginning. Moreover, if one lives, as perhaps most of us do, in a society of changing and conflicting outlooks, one's own thinking may very well proceed from rival and incompatible presuppositions; in such a case it is one's own communication with oneself that is befogged, and the failure to understand includes a failure of self-understanding. Philosophers may not be all that good at appreciating philosophic standpoints different from their own. But nature and training together incline them in favor of systematization and consistency, and hence both to a more thorough-going

advocacy of one position rather than another and to a corresponding awareness that other people may disagree. Thus, even if they think that the views of their opponents are in the end demonstrably mistaken, their systematic expositions of their own views, their attacks on their opponents and their replies to their opponents' attacks, all help to articulate the nature, and display the characteristic strengths and weaknesses, of their respective positions.

Any serious attempt to assess these strengths and weaknesses would, unfortunately, lie well beyond the scope of the present article (which was, it may be recalled, restricted to indicating the *kind* of implications that moral philosophy might have for moral education). In any case, I am myself at present inclined to the belief that Autonomists and Naturalists can each, from within their own frameworks of concepts and assumptions, find at any rate some viable version or versions of their theses and, to their own legitimate satisfaction, deal in one way or another with any objection that the other side may bring; but that neither side can disprove the case of its opponents in the sense of showing that the case must, in whatever version it be presented, remain internally inconsistent or incomplete. Thus, the Autonomist may very well complain that Naturalism allows no room for individual moral criticism of established values; or the Naturalist, that Autonomy fails to draw a real distinction between values on the one hand and personal preference on the other. But to these complaints it may be replied that it is always open to the enlightened individual to attempt a reinterpretation of values through the recognizably fundamental categories, outside which his criticism will be unintelligible as *moral* criticism; or that the distinction between preference and value can be perfectly well made on the basis of some purely formal principle, such as that of the universalizability of genuinely moral (or evaluative) judgements. The difficulty is to find a point of neutral stability on which to rest one's balance of assessment.

I am acutely aware of the fact that this is, both intellectually and practically, an untidy and unsatisfactory conclusion to come to—that it solves very few problems and raises a number of new ones that hardly existed before. Of course, the issues involved in testing out the internal self-consistency of both the Autonomist's and the Naturalist's positions in their various versions can become exceedingly technical and complex; and it is thus entirely possible that I should be brought to recognize that my present conclusion is mistaken. But meanwhile, my most urgent problem must be to work out where the recognition of Autonomist and non-Autonomist positions as each self-sufficient and both logically and practically viable structures for understanding morality is going to leave someone like myself. It may sound in a way all very fine and superior to be able to say of two contrasting theories (or families of theories) that both may be right from their own point of view,

but that neither viewpoint has the exclusive monopoly of the truth: to say this may give one the temporary appearance and feeling of being somehow above the battle. But this said, the question remains as to what, if one can no longer accept the characteristically exclusive claims of either contestant, is to be one's own view of morality.

On this question I have as yet disappointingly little to say; what is worse, that little is still so uncertain and ill-digested as to make it impossible to state it briefly and clearly. So let me say just this: it seems to me that if there is to be a third position, it is exceedingly unlikely to be something quite distinct from the other two. On the contrary, it must, I think, be sought in some kind of synthesis, a synthesis which would provide a platform from which the two previous positions could more easily be seen as intelligible than either of them can appear to a wholehearted proponent of the other. One cannot, of course, achieve a synthesis merely by sticking two opposing views together; in the process of a genuine synthesis both are bound to be subject to new limitations and modifications. To give an example of the sort of thing that I have in mind: it seems plausible (though still highly speculative) to argue that it is only in certain sorts of social and cultural conditions that such a thorough-going individualistic view of morality, as is that of the Autonomists, could become possible or even intelligible; that is to say, that it is only in the context of a certain sort of social structure—against the background of a certain level and type of social, economic and political development—that provision could be made for the kind of status necessary for the individual before he could be regarded, or could even regard himself, as constituting in his own right a creative center of values. And if this is so, it would follow that the new-style Autonomist could not coherently think of every individual as creating his own moral values for himself, but only those individuals who belonged to such a culture or society; for it is only to such individuals that the concepts would be available to think their morality for themselves. A determined Autonomist might be tempted to say that it was only in such types of society that true morality was possible. From which it would further follow that the Autonomist who wanted to preserve the possibility of morality would have to look beyond a care for individuals considered as radically discrete and independent entities to a concern for the social structure within which such a form of individualism might be preserved.

Meanwhile, to speak autobiographically, I remain more than somewhat uncomfortably poised between this possible but as yet quite unworked-out third position and that particular version of Autonomism which I myself held up to not so very long ago. My position between these two positions is one of a highly unsteady equilibrium: oscillation is probably a better word. This has both theoretical and practical inconveniences. In my theorizing

there certainly seem to be moments when I reappear as an Autonomist at heart—witness perhaps my suggestion that the only reasonable help that educators can demand from philosophers is help to enable them to see and to think their problems for themselves; and while I see nothing whatsoever to be ashamed of in this point of view, I am uncertain of its proper theoretical connection with the new synthesis which I have hopefully in mind. In practice, I am still without any overall coherent view of the sort of framework within which to define and direct the purposes of moral education; and both as teacher and as parent, this is the sort of problem that one can easily ignore but cannot hope really to escape.

I have put this dilemma autobiographically because that seemed to be the clearest way to put it; but the autobiographical element is, of course, in no way interesting or important. The dilemma, however, seems to me to be both. It seems to me characteristic of much deliberate and not so deliberate moral education at the present time that it also oscillates between Autonomist and non-Autonomist presuppositions. Part of the time, children and young people (and older people, too) are encouraged to learn that they must not only think but also decide for themselves; the other part of the time, they find themselves faced with an insistence that morality is only to be understood and observed within certain very general or not so general limits, and that these they must learn—if they wish to become morally responsible—to observe and accept. It is not surprising if many find the situation confusing.

I emphatically do not claim that philosophy has at the moment any clearly acceptable solution to this dilemma. I have tried only to illustrate the very real connection at this point (as indeed at others¹) between the interests of educators and moral philosophers. But it is not only the educator who is driven to think philosophically as he tries to get clearer on these issues: the moral philosopher, too, may be helped to see more clearly if he remembers at all times that the concepts and presuppositions of morals have to be taught and learned as they are passed on from one generation to another.

¹ One such, indeed ultimately related, point is that at which problems arise concerning notions of "responsibility," and whether full moral responsibility is a necessary condition for the passing of any sort of moral judgement. I have tried to say something about the nature of these problems in "Deliberate Wrongdoing," an article which appeared in *La Revue Internationale de Philosophie*, Volume 70, 1964.

The authors undertake first to define the subject matter of rhetoric as it has been traditionally understood and then to illustrate how aspects of one linguistic theory, tagmemics, can form the basis for a new approach to rhetorical problems

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Toward a Modern Theory of Rhetoric: A Tagmemic Contribution *

Our discussion will be adequate if it has as much clearness as the subject-matter admits of, for precision is not to be sought for alike in all discussions. . . . We must be content . . . in speaking of such subjects and with such premises to indicate the truth roughly and in outline, and in speaking about things which are only for the most part true and with premises of the same kind to reach conclusions that are no better. In the same spirit, therefore, should each type of statement be *received*; for it is the mark of an educated man to look for precision in each class of things just so far as the nature of the subject admits; it is evidently equally foolish to accept probable reasoning from a mathematician and to demand from a rhetorician scientific proofs.

ARISTOTLE, *Nicomachean Ethics* i.3.1094b 12-28.

TRANS. W. D. ROSS

I

Years ago, the heart of a liberal education was the trivium of grammar, logic, and rhetoric. Modern linguistics has come to encompass more and more of this trivium, and has in the process become transformed. Traditional gram-

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mar is no longer anathema to the linguist, and linguistic description has adopted many of the techniques of logical analysis. Furthermore, linguistics is becoming increasingly interested in the analysis and description of verbal structures beyond the sentence, traditionally a rhetorical concern. It seems fitting, therefore, to explore the relationships of linguistics and rhetoric—discovering, hopefully, just what contributions a theory of language can make to a modern theory of rhetoric.

As Aristotle states in the quotation given above, the nature of the subject matter imposes some constraints on the statements we make about it. It is our intention, therefore, to define the subject matter of rhetoric as it has been understood traditionally, and then to illustrate how aspects of one modern linguistic theory—tagmemics—can form the basis for a new approach to rhetorical problems. The field is broad and there are many points of contact between linguistics and rhetoric which will be passed over here. Nor can we hope to consider all linguistic points of view, each with important contributions to make. We will limit ourselves to a description of three traditional stages in the rhetorical process—invention, arrangement, and style—and then approach the problems of each stage via tagmemic theory.

There are four rhetorical traditions which, taken together, constitute the history of rhetoric. There is sophistic rhetoric, which has as its goal the effective manipulation of language without regard to truth and logic. This tradition continues in modern propaganda and in advertising techniques. There is Platonic anti-rhetoric, which stresses not the art of writing but the quality of the writer in his adherence to truth and virtue: a good writer is a good man writing. There is the rhetoric of literary criticism, which applies the categories and techniques of rhetoric to the analysis and evaluation of poetry, drama, and narration. And finally, there is Aristotelian rhetoric, which had its origins in the law courts of early Greece and which was expanded, systematized, and given a philosophic foundation by Aristotle. After being brought to perfection by Cicero and Quintilian, it constituted a basic, and at times *the* basic, discipline in Western education for fifteen hundred years. It survives today, but with greatly diminished influence. Because this is still the most complete rhetoric ever developed and because it best defines what traditionally has been the scope of rhetoric, we shall focus our attention almost exclusively on the Aristotelian tradition.

For Aristotle, rhetoric was "the faculty of observing in any given case the available means of persuasion."¹ Its immediate end was to persuade a popular audience of what is true and just; its ultimate end was to secure the cooperation necessary for a civilized society. The classical art of rhetoric consisted

¹ Aristotle, *Rhetoric*, i.2.1355b 26-27, trans. W. D. Ross, in *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1941), p. 1329.

of five separate arts which together embraced the entire process of developing and presenting a persuasive discourse: invention, arrangement, style, memory, and delivery. As the last two concern speaking rather than writing (which has become the principal concern of modern rhetoric), we shall consider only the first three: invention, arrangement, and style.

"Invention," wrote Cicero, "is the discovery of valid or seemingly valid arguments to render one's cause plausible."² Rhetoricians distinguished two kinds of arguments: extrinsic arguments, which came ready-made to the writer (e.g., eyewitness testimony, documents, confessions), and intrinsic arguments. The latter were of special interest to rhetoricians because they were subject to discovery by means of a system of topics. These topics were a kind of checklist of mental acts one could use when investigating and collecting arguments on a subject (e.g., definition by genus and differentia, comparison and contrast, cause and effect). Certain of these topics—the "common" topics—were appropriate to all types of speech; others—the "special" topics—were appropriate to only one of the three types of speech studied in the classical system: forensic, political, or ceremonial.

Use of the topics presupposed wide learning since they were primarily a method for putting the writer in contact with knowledge which already existed. Edward Corbett has remarked that Mortimer Adler's *Syntopicon* of Great Ideas of the Western World would have been an ideal reference work for the ancient rhetorician.³ It was the art of invention which made rhetoric the core of humanistic education until the late Renaissance.

During the Renaissance, under the influence of Bacon and Descartes, logic increasingly came to be seen not as the art of learned discourse, as it had been since Greek times, but as an instrument of inquiry. Rhetoric gradually enlarged its boundaries to include the arts of both learned and popular discourse. The process was finally completed in the nineteenth century in the work of John Stuart Mill; commenting on the proper domains of logic and rhetoric, Mill remarked that

the sole object of Logic is the guidance of one's own thoughts: the communication of those thoughts to others falls under the consideration of Rhetoric, in the large sense in which that art was conceived by the ancients. . . .⁴

This spirit of modern science which was modifying the nature of logic and the scope of rhetoric also had its effect on the art of invention. Since the

² Quoted in Wilbur S. Howell, *Logic and Rhetoric in England, 1500-1700* (Princeton, N.J.: Princeton University Press, 1956), p. 66.

³ Edward P. J. Corbett, *Classical Rhetoric for the Modern Student* (New York: Oxford University Press, 1965), p. 171.

⁴ Quoted in Howell, p. 350.

seventeenth century, we have increasingly regarded facts and experimental evidence as the basis for sound argument, rather than relying—as did our ancestors—on the wisdom of the past. That is, we have increasingly put our faith in extrinsic arguments. We have become much more interested in techniques for discovering what is unknown than in techniques for bringing old beliefs to bear on new problems. Thus the classical art of invention has diminished in importance while the modern art of experimental inquiry has expanded immensely. But this art of inquiry is no longer a part of modern rhetoric—each academic discipline having developed its own discovery procedures. The strength and worth of rhetoric seem, however, to be tied to the art of invention; rhetoric tends to become a superficial and marginal concern when it is separated from systematic methods of inquiry and problems of content.

The second art in classical rhetoric was that of arrangement. Rhetoricians developed persuasive patterns for organizing their materials—flexible systems of slots into which appropriate categories of subject matter were fitted. One common arrangement, the Ciceronian, had six slots: the exordium; the narrative, or exposition of the problem's history; the proposition; the demonstration; the refutation of alternative propositions; and the peroration. The functions and structures of each of these slots were systematically developed and described. Arrangement was the art of distributing within this pattern the subject matter gathered in the process of invention; arrangement also involved modifying the pattern by expanding, omitting, or reorganizing the various steps to meet the needs of the audience, speaker, and subject matter. The pattern was employed in all three types of speech: forensic, political, and ceremonial.

Since rhetoric was the art of persuasion, patterns for other modes of discourse (e.g., description, exposition) were given little attention. In the seventeenth century, however, developments in science led to an increasing interest in expository prose, a movement which parallels the shift from intrinsic to extrinsic argument. Other developments, such as the decline in the power of the aristocracy and the growing importance of evangelical religion, led to a rejection of elaborate patterning and the development of simpler, more manageable rhetorical forms, though none was described in the same detail as were the classical patterns.

Implicit in classical theory was a dualistic conception of discourse. Form was treated as independent of both the subject matter and the writer. Since the Renaissance, there has been a tendency to see form as the product of a particular mind or as discoverable within the subject matter itself. In the latter case, the form of a discourse is not separable from the content—the discourse is seen as having an organic unity. In either case, the form of a

work is not predictable. If form is a personal matter, or is implicit in the subject matter, the rhetorician can make fewer generalizations about arrangement. Classical rhetoric was a rhetoric of precept; in modern times it has become, for the most part, a rhetoric of practice.

Style, the third of the rhetorical arts in classical rhetoric, was largely the technique of framing effective sentences. Its function was to give clarity, force, and beauty to ideas. Although grammar was its foundation, style was clearly a separate art, concerned with the effective use of language rather than simply with the correct use. Both, however, were concerned with language at the sentence level.

Aristotle justified the study of style on practical grounds. Ideally, rational argument alone should be sufficient to persuade. Since experience suggests that this is often not sufficient, the art of style must be employed if wisdom is to be persuasive. The art of style tended, however, to become an end in itself, at times preempting the entire field of rhetoric, possibly—as in the classical conception of arrangement—because of a dualistic view in which content and style were separable.

In the classical tradition, good style was a deliberate departure from the speech of everyday life. Renaissance classicists ingeniously isolated and systematized figures of speech. Henry Peacham's *Garden of Eloquence* (1577), for example, lists 184 schemes and tropes—artistic departures from ordinary syntax and word meanings. Clarity and appropriateness became less frequent constraints than elegance and ingenuity. As a result, "rhetoric" gained its pejorative connotation of elegant but empty verbosity.

As with the other rhetorical arts, there was a reaction against this concept of style; rhetoricians now sought a norm closer to the speech of everyday life. In the eighteenth century, the dualistic conception of style and content began to compete with monistic conceptions. Style came to mean either the characteristic expression of a particular personality (*Le style c'est l'homme même*) or the mode of expression organically a part of the subject matter itself.

Since the eighteenth century, the analysis of style has become almost exclusively the concern of literary criticism. In rhetoric courses today, style is still seen by and large as the art of framing effective sentences; but the art is much simpler, less systematic, and considerably more intuitive than it was in classical rhetoric.

The classical art of rhetoric has a number of weaknesses which make it inadequate for our time. Without involving ourselves directly in a criticism of the philosophical assumptions upon which classical rhetoric is based, we can note, in general, four major problems. First, the classical art of invention stresses authoritative confirmation of present beliefs, while modern modes of inquiry stress imaginative discovery of new facts and relationships. Second,

the art of arrangement includes only patterns of persuasion, and neglects considerations of form in other important rhetorical modes such as description, narration, and exposition. Third, both the art of arrangement and the art of style divorce form from content, failing to consider the importance of the act of discovery in the shaping of form. And finally, the art of style is concerned primarily with embellishing, clarifying, and giving point to sentences, an approach which neglects both the deeper personal roots of style and the ways in which style is manifested in patterns beyond the sentences.

In recent years, numerous rhetoricians have been seeking a new rhetoric which would be as effective on a practical level and as stimulating and coherent on a theoretical level as is classical rhetoric. As Daniel Fogarty puts it, there are numerous "roots for a new rhetoric."⁵ While other members of the trivium have changed greatly from their earlier forms (witness the revolution in Mill's *System of Logic*, the later changes in symbolic logic, and the recent revolution in grammatical theory), there has as yet been no comparable change in rhetoric. That is, there has been no change which includes both a complete theory and an explicit practical method. Rhetoric is still in the midst of a chaotic transition period. I. A. Richards is right, unfortunately, when he describes the general state of rhetoric today as

the dreariest and least profitable part of the waste that the unfortunate travel through in Freshman English! So low has Rhetoric sunk that we would do better just to dismiss it to Limbo than to trouble ourselves with it—unless we can find reason for believing that it can become a study that will minister successfully to important needs.⁶

II

The tagmemic approach to language analysis and description, developed primarily by Kenneth L. Pike and his associates in the Summer Institute of Linguistics,⁷ has for many years been concerned with problems which have traditionally been within the scope of rhetoric. This concern results, in part, from the strong motivation which such a model gives for moving beyond the

⁵ Daniel Fogarty, *Roots for a New Rhetoric* (New York: Bureau of Publications, Teachers College, Columbia University, 1959).

⁶ I. A. Richards, *The Philosophy of Rhetoric* (New York: Oxford University Press, 1936), p. 3. Kenneth Burke and S. I. Hayakawa have both developed extremely interesting theories of rhetoric and must be mentioned, along with Richards, as having made notable contributions to the development of a new rhetoric.

⁷ The basic source of tagmemic theory is Kenneth L. Pike, *Language (in Relation to a Unified Theory of the Structure of Human Behavior)* (Glendale, Calif.: Summer Institute of Linguistics, Part I, 1951; Part II, 1955; Part III, 1960). A new edition, to be published by Mouton, is in preparation. Pike applies tagmemic theory to problems of rhetoric in "Beyond the Sentence," *College Composition and Communication*, XV, No. 3 (October, 1964), and "Discourse Analysis and Tagmeme Matrices," *Oceanic Linguistics* (April, 1965).

specification of well-made sentences. In tagmemic theory, any linguistic unit is assumed to be well defined only when three aspects of the unit are specified: its contrastive features, its range of variation, and its distribution in sequence and ordered classes. This constraint on grammatical description (defined as a description necessary and sufficient to include all relevant aspects of any linguistic unit) has meant that a complete description of sentences, for example, should include a specification of their distribution in paragraphs and other larger units of discourse.

This concern with problems which traditionally have been a part of rhetoric also results from the desire of many who use the tagmemic model to provide a means for producing extended discourse, primarily biblical translation. Translators frequently encounter instances of grammatical constraints extending beyond the sentence. In some Philippine languages, for example, there is a system of focus somewhat like active and passive voice in English though vastly more complex. To produce understandable discourse in these languages apparently requires a marked correlation between situational roles (actor, goal, instrument, setting, etc.) and grammatical roles (subject, predicate, object, locative, etc.) in a sequence of sentences.⁸

As the linguist moves beyond the sentence, he finds himself asking questions which have long concerned rhetoricians. The description of the structure of a sentence and the description of the structure of an expository paragraph, extended argument, or novel are not sharply different kinds of activity, for all involve selecting and ordering language in a significant way. The traditional separation of grammar, logic, rhetoric, and poetics begins to break down.

Selecting and ordering language, however, has two aspects. One sort of inquiry into the selection and ordering of language leads us deeply into the mental activity of the writer and into questions which are difficult, perhaps impossible, to answer except intuitively. Can we specify in detail why a writer chooses to write "John loves Mary" rather than "John is in love with Mary"? Probably not; we can only describe the choices he does make, the characteristic features of his style. Another sort of inquiry, however, leads us to the conventions which constrain the writer. We can specify the reasons why "Love John is Mary in" does not make sense to us except in rather far-fetched ways. In the same way, we believe we can specify why the following sequence of sentences does not make sense:

The trees are budding. Coal is a form of carbon. He has been singing for three hours now. The world used to be round. It seems enough.

⁸ Kenneth L. Pike, "A Syntactic Paradigm," *Language*, XXXIX (April-June, 1963), 216-30. See also "Discourse Analysis and Tagmeme Matrices," footnote 7.

If we were to prod the reader, insisting that the above "sentence" and "paragraph" do have meaning, he could probably find some sense in them, as many have in Chomsky's "Colorless green ideas sleep furiously." In each case one "discovers" meaning by imposing conventional formal patterns on the deviant sequences.

Both the process of imposing pattern on (or discovering pattern in) apparently meaningless utterances and the process of describing the conventions of language are important to the linguist. In the former process, he uses some sort of discovery procedure; in the latter, he employs a descriptive model which specifies the structures of conventional utterances. Although the act of discovery is in part intuitive, the model does provide both a method for finding significant linguistic patterns and a taxonomy of the sort of patterns the analyst is likely to find—the still tentative universals of language. Discovery procedures are not mechanical; there is as yet no completely systematic way of analyzing a language, just as there is no algorithm for planning an effective literary composition. But there are important guides to the processes: one can learn to analyze a language and he can learn a great deal about how to write an essay or a novel.

We believe that the procedures the linguist uses in analyzing and describing a language are in some important ways like the procedures a writer uses in planning and writing a composition, and hence that tagmemic theory can provide the basis for a new approach to rhetoric. Tagmemic discovery procedures can provide a heuristic comparable to the Aristotelian system of invention; the tagmemic descriptive model can give us a vehicle for describing conventional rhetorical patterns. If our beliefs are sound, this approach will provide a bridge between the traditionally separate disciplines of grammar and rhetoric.

A heuristic is a method of solving problems, a series of steps or questions which are likely to lead an intelligent analyst to a reasonable solution of a problem. There are two different (though related) kinds of heuristic: a taxonomy of the sorts of solutions that have been found in the past; and an epistemological heuristic, a method of inquiry based on assumptions about how we come to know something. Bacon's statement of the distinction is worth quoting:

The invention of speech or argument is not properly an invention: for to invent is to discover that we know not, and not to recover or resummon that which we already know; and the use of this invention is no other but *out of the knowledge whereof our mind is already possessed, to draw forth or call before us that which may be pertinent to the purpose which we take into our consideration*. So as, to speak truly, it is no *Invention*, but a *Remembrance* or *Suggestion*, with an application; which is the cause why the schools do place it after judgment, as subsequent and not prece-

dent. Nevertheless, because we do account it a Chase as well of deer in an inclosed park as in a forest at large, and that it hath already obtained the name, let it be called invention: so as it be perceived and discerned, that the scope and end of this invention is readiness and present use of our knowledge, and not addition or amplification thereof.⁹

Aristotelian rhetoric provides a taxonomy of effective rhetorical arguments which a speaker can use to attain specific ends with specific audiences. Tagmemic theory, on the other hand, provides an epistemological heuristic.

Tagmemic epistemology is based largely on two principles, though other principles are necessary for a complete statement of the theory. These two principles emphasize the active role of the observer in discovering pattern, and hence meaning, in the world around him. The first principle contrasts external and internal views of human behavior—in tagmemic jargon, *etic* and *emic* views. This distinction can be seen in the differences between phonetic and phonemic contrasts in linguistic phonology. A phonetic inventory provides a systematic statement of the overt phonological distinctions which occur in various human languages, while a phonemic description provides a systematic statement of the *significant* phonological distinctions in a particular language. A distinction is judged significant, and hence phonemic, if it signals a difference in the lexical meaning of linguistic units. Though there is much controversy about how phonological signals are to be described, the basic distinction remains valid: the contrast, for example, between aspirated and unaspirated consonants is lexically significant for a native speaker of Hindi or Burmese but not for a native speaker of English, who has difficulty in learning to hear this contrast.

The distinction is especially important when two emic systems come in contact, as when the speaker of English is learning to speak Hindi and is forced to recognize that his native distinctions are emic and not necessarily universal. Likewise, one who finds himself in a different culture must learn to distinguish universals of human behavior from particular customs and mores which taken together comprise the emic distinctions of a culture. The ways of treating time and space, for example, vary throughout the world, and one must learn these ways if he wishes to communicate and cooperate outside his own culture.

Though it is interesting to envision a universal etics of rhetoric—an orderly classification of the rhetorical forms found throughout the world—our present concern must be with the writer of English who is writing for readers of English. Even with this restriction one confronts frequent clashes of emic systems, for if a writer has anything new to say, his image of the world must

⁹ Quoted in Howell, p. 367.

be in some way different from that of his reader. It is at this point of difference that his message lies. He may seek to expand or clarify some feature of the reader's image, thus making it more nearly like his own, or he may seek to replace some feature of the reader's image. In the first instance he would be informing; in the second, persuading.

Before developing this discussion of rhetorical intention further, we must introduce the second major principle in tagmemic epistemology. This principle asserts that a complete analysis of a problem necessitates a trimodal perspective. After the trimodal principle had been worked out in tagmemic theory and the so-called *feature*, *manifestation*, and *distribution* modes had been defined, Pike noted a striking similarity between these modes and the triple perspectives of modern physics—the complementary views of physical phenomena as involving particles, waves, and fields; as a consequence, Pike decided to adopt this second set of terms for his behavioral model.¹⁰

Language phenomena—and presumably all human behavior—can be viewed in terms of particles (discrete contrastive bits), waves (unsegmentable physical continua), or fields (orderly systems of relationships). For example, a sentence can be viewed as a sequence of separate words or morphemes; as a physical continuum consisting of acoustic waveforms; or as a system of interrelationships manifesting the grammatical, lexical, and phonological rules of English. Tagmemic theory asserts that only by this complementarity of perspectives is a complete analysis of language structure possible.

The principle of trimodalism gives the analyst both a procedure for approaching new problems and a safeguard against a too limited view of the data. Only when he has described his data from all three perspectives can he be reasonably sure that his analysis is complete. The writer, likewise, can use the principle as an aid in discovering a wide range of features in his topic. Though a writer often emphasizes one mode in a particular work, he should be aware of the other possibilities, particularly if his readers customarily emphasize a different mode. Let us consider a simple example. A particle description of a flower emphasizes those features which make it distinctive from other flowers. A wave description emphasizes the flower as a moment in a process from seed to final decay (even this is only a peak in a larger wave) or as merging into a scene. A field description may partition a flower into its functional parts or classify it in a taxonomical system. The flower may also be seen metaphorically or symbolically, in which case it is conceived as part of a new conceptual field (religious, say, or geometric), where certain of its features (its beauty or its shape) are hypostatized, allowing it to manifest

¹⁰ Kenneth L. Pike, "Language as Particle, Wave, and Field," *The Texas Quarterly*, II (Summer, 1959), pp. 37-54.

a category in a new field. One can view any topic trimodally and soon discover a wide range of significant perspectives.¹¹ The process is broad, flexible, and intuitive, though the intuition is guided by what has proved to be a very fruitful principle. It is especially useful since it is not limited to a particular subject matter. In this sense, it is similar to the "common" topics of classical rhetoric. A generally applicable approach helps to free us from the built-in limitations of a conventional, specialized approach. Thus the discovery procedure has a corrective function also.

This heuristic procedure—based on the emic-etic distinction and trimodal perspective—both helps the writer explore his topic and generates a set of questions which he can use to analyze his reader's preconceptions, that is, his reader's emic system:

1) What are the distinctive features of the reader's conception of the topic? What characteristics does it have that lead him to contrast it with similar things? (Particle view)

2) How are the reader's views on this topic part of a mental process, a phase in the continual development of his system of values and assumptions? (Wave view)

3) How does the reader partition the topic? What are its functional elements for him? How does he classify it? (Field view)

The answers to these questions provide criteria for selecting and ordering the writer's subject matter as he develops his discourse.

The missionary linguist in the field seeks to translate his message into the language and cultural conventions of the people, not to teach them English and his own emic conventions. He does not seek to replace their emic system with his own, but to modify their image after finding within it their motivations for receiving his message.¹² For he realizes that change is most effective and enduring when it occurs within the emic system of those he is trying to convince. Unlike traditional rhetoric which sought to persuade people by confirming authoritative attitudes, modern rhetoric, we believe, must seek identification. That is, the writer must seek to have his readers identify his message with their emic system.

Because it seeks identification rather than persuasion, and because this assumption often leads the writer to modify his own position, modern rhetoric—still in the process of development—is characterized by Kenneth Burke and others as "discussion rhetoric." The basis for a rhetoric of this sort has

¹¹ For further illustrations of the use of tagmemic discovery procedures in rhetorical invention, see Hubert English, "Linguistics as an Aid to Invention," *College Composition and Communication*, XV, No. 3 (October, 1964).

¹² Our conception of the image here is drawn in large part from Kenneth Boulding, *The Image* (Ann Arbor: University of Michigan Press, 1956), and from William Angus Sinclair, *Conditions of Knowing* (London: Routledge and Kegan Paul, 1951).

been developed by Anatol Rapaport in his book *Fights, Games, and Debates*, where it is called Rogerian debate—its assumptions having been derived from the methods of the psychotherapist Carl Rogers.¹³ This principle of identification of the writer with his audience points toward a rhetoric not of opposition but of mutual respect.

A comparison of emic systems—different systems of selecting and grouping followed by writer and reader—leads the writer to find what he shares with his reader in his conception of the topic and what he does not share. One of the assumptions of tagmemics is that change can occur only over the bridge of a shared element. There can be no action at a distance. The key to understanding language change, for example, is the identification of the shared features of the initial state and the subsequent altered state. The writer's message is an unshared item in the comparison, while the shared items, insofar as they are relevant to the message, provide the means by which the reader can identify—and identify with—the message. Shared items are the potential bridges over which change can take place. These bridges may be broad cultural conventions or more specific things such as common social roles, problems, or philosophical assumptions. Among the most important of these shared items is a common language—a common set of patterns and rules governing selection and grouping of words or morphemes within a sentence, and of sentences and paragraphs within still larger units of discourse. It is here that the linguist can make his unique contribution to a new theory of rhetoric, especially as he broadens his focus to include units larger than the sentence.

So far we have dealt chiefly with what might be called prewriting problems, problems of discovery. We believe, as did Aristotle and Cicero, that a complete theory of rhetoric must include the entire sequence of acts which result in the finished discourse, beginning with the initial act of mental exploration. We have offered two principles of tagmemic heuristic as an indication, hardly an exhaustive one, of how linguistics can contribute to this aspect of rhetorical theory. We now turn to a description of rhetorical patterns beyond the sentence, extending techniques which have been used in the past in the description of lower-level patterns.

Early tagmemics was essentially, but not entirely, a slot-and-substitution grammar, describing linguistic patterns as sequences of functional slots which are filled, or manifested, by a class of fillers. These slots are seen as functional parts of a pattern and may be stated in a formula such as the following simplified formula for an English transitive sentence:

¹³ Anatol Rapaport, *Fights, Games, and Debates* (Ann Arbor: University of Michigan Press, 1961).

+ Subject + Verb + Object $\pm$ Manner $\pm$ Locative $\pm$ Temporal

(He walked the dog slowly around the block yesterday.) Some of these slots are obligatory (+), some optional ($\pm$). Each may be manifested by one of a set of filler constructions; thus the subject slot can be filled by a noun phrase, a pronoun, an adjective phrase, a verbal phrase, a clause, etc. More fully represented, the subject slot in the formula above would be:

+ Subject: np,p,ap,vp, . . . c

Tagmemics assumes that language is composed of interlocking lexical, phonological, and grammatical hierarchies. Here, the internal surface structure of the fillers of the subject slot of the sentence are described at the clause, phrase, word, and morpheme levels of the grammatical hierarchy.

In at least two important ways, however, recent tagmemic grammar goes beyond the surface-level descriptions of other slot-and-substitution grammars.¹⁴ First, tagmemic grammars go on to represent the filler class of a functional slot as a multidimensionally ordered set, or, in tagmemic jargon, a matrix. The categories of these ordered sets indicate relationships of concord between one tagmeme and another; thus, the filler class of the subject tagmeme is ordered into categories such as singular-plural and human-nonhuman in concord with these same categories in the predicate, so that, for example, a singular, nonhuman subject specifies the selection of a singular, nonhuman verb, preventing such collocations as "the tree jump fences."

Second, and more important for our present discussion, tagmemic grammars specify in addition to the surface structure of patterns an ordered set of operations to be carried out on the patterns. These include ordered reading rules by which all possible readings of a formula are generated. Then each reading is reordered according to permutation rules. Finally, in each reading and its permuted variants, the tagmeme symbols are replaced by each of the possible filler constructions according to a set of exponence rules. These operations are carried out repeatedly until only morphemes or symbols for morpheme classes manifest the formulas, which are then terminal grammatical strings, not yet sentences until phonological and lexical specifications have been met.

Though a description of English will not specify sentences such as the one mentioned earlier, "Love John is Mary in," it so far contains no constraints to prevent it from accepting a sequence of sentences of this type:

¹⁴ A full description of tagmemic grammatical theory can be found in Robert Longacre, *Grammar Discovery Procedures* (The Hague: Mouton, 1964). Tagmemics is contrasted with transformational and other models in Longacre, "Some Fundamental Insights of Tagmemics," *Language*, XLI, No. 1 (January-March, 1965), pp. 65-76.

The trees are budding. Coal is a form of carbon. He has been singing for three hours now. The world used to be round. It seems enough.

This is not a paragraph because there is no formal connection between the sentences. We can discern no conventional pattern relating them, as we can, for example, in this pair of sentences:

What is John doing?

He's washing his face.

This second sequence manifests a conventional rhetorical pattern—Question-Answer. The question is marked by three formal features: the word order, the question word *what*, and (in writing) the punctuation. The second sentence is recognized as an answer to the question by: the pronoun reference (*he* has to be a substitute for *John* here); the parallel grammatical structure, in which the functional slots of the question words in the first sentence (What . . . doing) are filled in the second (washing his face); the parallelism of verb form (is —ing); the fact that *washing* is a possible lexical equivalent for *doing*; and (in writing) the period. Question-Answer is a formal pattern illustrating a number of formal constraints which extend beyond the sentence.

The relationship of these two sentences can be described in numerous ways (probably most simply by seeing the first as a permutation of the second), but the sentences can only be described as a *sequence* by positing the larger Question-Answer pattern, and by specifying the formal ways in which the two functional slots in this larger pattern are related, just as we specify the relationship between subject and predicate in a sentence. A number of these relatively simple two-part patterns can be described, including greetings, cause and result (hypothesis), topic and illustration, topic and partition, disjunction, and so forth. These patterns can be manifested by a single sentence or by two or more sentences. A large number of higher-level units of discourse can be described as chains of these simple two-part patterns.

As we move on to larger rhetorical patterns, the complexity increases. Formal signals become redundant: for example, we can identify the Answer in the Question-Answer pattern above by five of its contrastive features. Further, lexical and semantic features become increasingly important in recognizing patterns: in the example above we recognize *washing* as a lexical equivalent of *doing*. Lexical equivalence chains are probably the most important markers of higher-level patterns.¹⁵ We can illustrate some of this complexity by attempting to describe the paragraph as a formal structure, limiting ourselves here to only one rather simple pattern.

¹⁵ The concept of lexical equivalence chains is derived in large part from Zellig S. Harris, *Discourse Analysis Reprints* (The Hague: Mouton, 1963), pp. 7-10.

We believe that written paragraphs are emically definable units—not just groups of sentences isolated by rather arbitrary indentations—and that this fact can be demonstrated. We are presently carrying out controlled testing of the recognition of these units in collaboration with psychologists at the Center for Research on Language and Language Behavior, University of Michigan. Informal investigation has shown that readers, given a text in which all paragraph indentations have been removed, can successfully mark paragraph breaks, with only limited indeterminacy at predictable points. In addition, the readers are able to recognize a number of recurring paragraph patterns and to partition these patterns in predictable ways.

One of the most common of these patterns is the one we have labelled TRI (topic-restriction-illustration) or more formally,

$$+ T^2 \pm R + I^n.$$

(The raised numbers indicate that in reading the formula, T may be read twice; R, once; and I, n number of times recursively.) This is the Topic-Illustration pattern with an optional intermediary slot in which the topic is restricted in some way (e.g., by definition, classification, or partition). The following paragraph illustrates this pattern:

(T) The English Constitution—that indescribable entity—is a living thing, growing with the growth of men, and assuming ever-varying forms in accordance with the subtle and complex laws of human character. (R) It is the child of wisdom and chance. (I) The wise men of 1688 moulded it into the shape we know, but the chance that George I could not speak English gave it one of its essential peculiarities—the system of a Cabinet independent of the Crown and subordinate to the Prime Minister. The wisdom of Lord Grey saved it from petrification and set it upon the path of democracy. Then chance intervened once more. A female sovereign happened to marry an able and pertinacious man, and it seemed likely that an element which had been quiescent within it for years—the element of irresponsible administrative power—was about to become its predominant characteristic and change completely the direction of its growth. But what chance gave, chance took away. The Consort perished in his prime, and the English Constitution, dropping the dead limb with hardly a tremor, continued its mysterious life as if he had never been.¹⁶

The slots in this tripartite pattern are marked by lexical equivalence classes, two of which have extended domains: 1) English Constitution, indescribable entity, living thing, It, child, . . . English Constitution; 2) men, human character, wise men of 1688, George I, Lord Grey, . . . Consort. Note that the domain of the first chain is the entire paragraph, while that of the second chain is the I slot. Chains can thereby be ranked as head and attribute chains, each paragraph including a head chain and one or more attribute chains.

¹⁶ Lytton Strachey, *Queen Victoria* (New York: Harcourt, Brace, 1921), pp. 300-301.

The slots are also marked by: grammatical parallelism (first and second sentences, third and fourth sentences); tense shift (shift to past in the I slot); pronoun domains; determiners; and transitional function words (then, but).

The TRI pattern has a number of variant forms which can be specified by the reading, permutation, and exponence rules. Only a few of these variants will be illustrated. Since R is optional, the pattern can be read as: + T + I. For example, a paragraph by Marchette Chute:

(T) The only safe way to study contemporary testimony is to bear constantly in mind this possibility of prejudice and to put almost as much attention on the writer himself as on what he has written. (I) For instance, Sir Anthony Weldon's description of the Court of King James is lively enough and often used as source material; but a note from the publisher admits that the pamphlet was issued as a warning to anyone who wished to "side with this bloody house" of Stuart. The publisher, at any rate, did not consider Weldon an impartial witness. At about the same time Arthur Wilson published his history of Great Britain, which contained an irresistibly vivid account of the agonized death of the Countess of Somerset. Wilson sounds reasonably impartial; but his patron was the Earl of Essex, who had good reason to hate that particular countess, and there is evidence that he invented the whole scene to gratify his patron.¹⁷

If I is read a number of times, the pattern may be broken by indentation into more than one paragraph, although it remains a single emic unit. Indentation, like line ends in poetry, can either correspond to formal junctures or, for various reasons, can interrupt the structure in a way somewhat similar to poetic enjambment.

The TRI pattern can be permuted to IRT, producing the so-called funnel effect or inductive structure. This is comparable to such permutations at the sentence level as "Home is the sailor" from "The sailor is home." Another illustration by Marchette Chute:

(I) The reason Alice had so much trouble with her flamingo is that the average flamingo does not wish to be used as a croquet mallet. It has other purposes in view. The same thing is true of a fact, which can be just as self-willed as a flamingo and has its own kind of stubborn integrity. (R) To try to force a series of facts into a previously desired arrangement is a form of misuse to which no self-respecting fact will willingly submit itself. (T) The best and only way to treat it is to leave it alone and be willing to follow where it leads, rather than to press your own wishes upon it.¹⁸

This permutation is frequently used to begin or end discourse, probably because it imparts a greater sense of closure than the more open-ended TRI order.

¹⁷ Marchette Chute, "Getting at the Truth," *The Saturday Review*, Sept. 19, 1953, p. 12.

¹⁸ *Ibid.*, p. 44.

Other permutations include TIRI, ITR, and TRIT, to list only the most common. Following exponence rules, slots in paragraph patterns may be filled by other rhetorical patterns. In the following example by Bernard Iddings Bell, the Answer slot in the Question-Answer pattern which we discussed earlier is filled by a TRI pattern, producing a compound paragraph structure:

(Q) Is the United States a nation composed chiefly of people who have not grown up, who think and act with the impulsiveness of adolescents? (A-T) Many shrewd observers of the American scene, both abroad and here at home, are saying that this is indeed the case. (R) They intentionally disturb our patriotic complacency. (I) They bid us view with alarm cultural immaturity revealed by current trends in journalism, by the radio, by the motion picture, by magazines and best-selling books, by mass response to emotionalized propaganda—political and otherwise; by a patent decay of good manners, by the spread of divorce and by other manifestations of parental irresponsibility; by all the various aspects of behavior which indicate to a student of human affairs the health or sickness of a civilization.¹⁹

Tagmemic matrix theory provides further insight into another traditional problem of rhetoric. We said earlier that form and idea are seen by many as organically unified, a view that we share. The literary statement contains within itself its own dimensions of development. It constitutes a semantic field which is clearly perceived when we try to extend it. The relevant categories of the English Constitution paragraph discussed above can be displayed in the rows and columns of an emic paragraph matrix (see Table 1).

If we were to extend the paragraph, we would be obliged to supply a still more recent illustration of the effect of wisdom on the Constitution. It should be possible from a study of a large number of paragraph matrices to generalize further about various types of paragraph development. The investigation of paragraphs as semantic fields is as yet only beginning.

A writer's style, we believe, is the characteristic route he takes through all the choices presented in both the writing and prewriting stages. It is the manifestation of his conception of the topic, modified by his audience, situation, and intention—what we might call his "universe of discourse." These variables directly affect selecting and grouping in all three linguistic hierarchies: grammatical, phonological, and lexical. An analysis and description of style involves the specification of the writer's characteristic choices at all points in the writing process, although usually only the final choices are directly accessible to the analyst.

The classical conception of style has a number of limitations. To see style

¹⁹ Bernard Iddings Bell, "We Are Indicted for 'Immaturity,'" *New York Times Magazine*, July 20, 1947, p. 8.

TABLE 1

historical manifestations	Forces shaping the English Constitu- tion	wisdom	chance
(1688)		The wise men . . . molded it into the shape we know	
(1714)			George I . . . gave it . . . the system of a Cabinet independent of the Crown and subordinate to the Prime Minister.
(1832)		Lord Grey saved it from petrification and set it upon the path of democracy.	
(1840)			[Victoria's marriage made it seem likely that a quiescent element] was about to become its predominant characteristic and change . . . the direction of its growth.
(1861)			[With the death of the Consort] the English Constitution . . . continued its mysterious life as if he had never been.
()			

as an addition to the message, an affective layer imposed on conventional language, ignores the close connection between language and idea. Seeing it as essentially a matter of sentences ignores stylistic patterns beyond the sentence. In addition, the theory grew out of a very specialized sort of practice—formal public speaking in the courts and legislatures and at ceremonial gatherings. As a result it has a limited range of applicability. Seventeenth century critics were right in saying that its generalizations were inappropriate to a wide range of important topics, audiences, and situations. Finally, the highly normative approach of classical rhetoric tends to ignore the individuality of the writer, describing *a style* rather than *style* itself.

To consider style, however, (as do some modern rhetoricians) to be the expression of a particular personality lays too much stress on one variable in

the relation between language and logic, it may be understood to mean that the semantic structure of natural language is different from and perhaps even incompatible with that of systematically developed logical theory. Another way of putting the matter is that in order to construct a sound logical theory, one must not only abstract from the nuances of natural language but must also depart from its structure in fundamental ways. This, I think, is what Russell had in mind when he wrote that "any attempt to be precise and accurate requires modification of common speech both as regards vocabulary and as regards syntax."³

A more narrow allegation within this general framework is the claim that natural languages are fundamentally contradictory—which would constitute an extreme case of deviance from logical structure. The question of the consistency or possible inconsistency of natural language is perhaps the most elementary question which can be raised concerning the relation between logic and language. Philosophical opinion seems to be currently divided on the issue, with some logicians skeptical of the question itself. Alfred Tarski has written:

Our everyday language is certainly not one with an exactly specified structure. . . . Thus the problem of consistency has no exact meaning with respect to this language. We may at best only risk the guess that a language whose structure has been exactly specified and which resembles our everyday language as closely as possible would be inconsistent.⁴

R. M. Martin has ventured the opinion that "one cannot settle this issue definitively perhaps until much more is known about the precise syntactical and semantical structure involved."⁵ Remarks like this convey the impression that the problem of the logical consistency of natural language is an empirical question regarding the facts of linguistic usage. On the contrary, I shall suggest that the problem is a purely conceptual one which can be explicated and solved with only minimal assumptions concerning the syntactical and semantical structure of the language.

The main result of this paper will be a demonstration of the inherent consistency of natural language. I propose to show that it is impossible for a natural language to be inconsistent. The logic of this demonstration resembles in some respects that of Hume's celebrated argument against the possibility of miracles which, it will be recalled, proceeds from this proposition:

³ Bertrand Russell, "Mr. Strawson on Referring," *Mind*, LXVI (1957), 387.

⁴ Alfred Tarski, "The Semantic Conception of Truth," *Philosophy and Phenomenological Research*, IV, Section 8 (1944).

⁵ Richard M. Martin, *Truth and Denotation*, (Chicago: Univ. of Chicago Press, 1958), p. 21.

... no testimony is sufficient to establish a miracle unless the testimony be of such a kind that its falsehood would be more miraculous than the fact which it endeavors to establish.⁶

Every statement announcing that a miracle has taken place may be regarded as a hypothesis. But it will be a hypothesis which by its nature can never be confirmed. Hume outlined a general procedure for refuting every such hypothesis by challenging the testimony upon which it ultimately rests. Furthermore, his remarks suggest an underlying confusion in the very idea of a miracle. For to declare that a miracle has occurred is to declare that some natural law has been violated—not disconfirmed, but violated—which is to declare that one and the same law *both* holds universally *and* suffers exceptions. Otherwise, Hume observed, the event could not strictly be called a miracle. Otherwise, the event would be a natural occurrence—perhaps rare, wonderful, and unexplained—but still a natural occurrence.

The first task will be to isolate the question by establishing some preliminary distinctions. Every natural language does in fact permit the formulation of pairs of sentences (*Felix is cunning*, *Felix is not cunning*) which by virtue of the semantic relation between them afford a man the opportunity of contradicting himself. Not that this is a welcome opportunity, for to contradict oneself is to be committed to a proposition which cannot possibly be true. When confronted with a contradiction in his thought, the reasonable man is obliged to retract at least one of his former beliefs. Now it might be presumed that an excellent instrument for scientific purposes would be a language which was contradiction-free in the sense that no contradiction could ever be formulated in accordance with its syntactical and semantical rules; such a language would spare us the trouble in individual cases of checking the consistency of our theories. But the language which is contradiction-free in that sense is a chimera, for the principles of its construction would render it conceptually impoverished. We can see this by reflecting on the sources of contradiction. Literal contradictions, which assert one proposition and then directly take it back (*Felix is cunning and he is not*),⁷ can be formulated in any language which incorporates the operations of negation and conjunction. Furthermore, some words or phrases are so related in their meaning that contradictory sentences can be constructed from them even without explicit recourse to negation and conjunction (*Some kings are female* or *This square has five sides*). It should be clear, then, that any language with even the most rudimentary logical apparatus or the most rudimentary semantical structure will permit the construction of sentences which

⁶ David Hume, *An Enquiry Concerning Human Understanding*, Section X, 1748.

⁷ Or still more literally: *Felix is cunning and it is not the case that Felix is cunning*.

are contradictory and which thereby could not possibly be true. Conversely, any language which somehow blocked the formulation of contradictory sentences would perforce lack the most rudimentary sorts of logical and semantical structure.

The fact that they permit the formulation of contradictory sentences is indeed no ground whatever for claiming that natural languages are logically inconsistent. It is merely a reflection of the ineluctable fact that some internally inconsistent theories or beliefs may be expressed in the language and may be held on occasion by speakers of the language. Let us then distinguish clearly between inconsistency of a theory and inconsistency of the language in which that theory is expressed. The latter and deeper sort of inconsistency alone is our concern here.

The main support for the contention that natural languages are logically inconsistent has arisen from the discovery of logical antinomies—valid arguments that proceed from seemingly innocent premises to self-contradictory conclusions. One such is the “heterological” paradox, originally formulated by K. Grelling.⁸ Grelling divided all adjectives into two sorts. *Autological* adjectives are those which, like “polysyllabic” and “short,” are true of themselves (the adjective “polysyllabic” is itself a polysyllabic word, and the adjective “short” is itself a short word). *Heterological* adjectives, by way of contrast, are those which, like “monosyllabic,” are not true of themselves. One would think that every adjective falls into one class or the other. But trouble arises when we consider the adjective “heterological” itself. If the word “heterological” were true of itself, then it would be heterological, that is, it *would not* be true of itself. If on the other hand the word “heterological” were not true of itself, then it would be heterological by definition, from which it follows that it *would* be true of itself. Thus the word “heterological” is true of itself if and only if it is not true of itself. From this, by an elementary logical transformation, we can derive the contradiction that the adjective “heterological” both is and is not true of itself.

Logicians are inclined to take such paradoxes seriously as symptoms of some underlying malady in our use of language. Thus Tarski declares that . . . it would be quite wrong and dangerous from the standpoint of scientific progress to depreciate the importance of this and other antinomies. . . . It is a fact that we are here in the presence of an absurdity, that we have been compelled to assert a . . . sentence [which] . . . is necessarily false.⁹

The mere existence of antinomies, of which the heterological paradox is

⁸ K. Grelling and L. Nelson, “Bemerkungen zu den Paradoxien von Russell und Burali-Forti,” *Abhandlungen der Fries'schen Schule*, II (1908), pp. 301-334.

⁹ *Op. cit.* It should perhaps be noted that Tarski refers here to a different paradox, the “antimony of the liar.”

only one of a number,¹⁰ by no means establishes that natural language is inconsistent, but it does to some minds suggest it. We have already quoted Tarski's conjecture on the matter. Carnap asserts quite directly in this connection that the "customary usage of the terms 'true' and 'false' leads. . . to a contradiction."¹¹ R. M. Martin more cautiously allows that natural languages are "perhaps inconsistent."¹² If the argument to be developed below is correct, then these philosophers are mistaken with regard to the import of the antinomies for the theory of natural language. This question, of course, must be kept distinct from the problem of the correct resolution of the antinomies within logical theory. With regard to the latter problem this paper makes no claim.

One simple assumption about the semantic structure of natural languages will be required in order to introduce the question of consistency. This assumption appears to be borne out in recent linguistic theory,¹³ and indeed it is a minimal foundation for a serious discussion of the problem. I shall assume, as appears to be the case, that natural languages contain certain "analytic" sentences whose truth is insured by the very meaning of their component words.¹⁴ As examples we might have: *All kings are male*, *No spinsters are married*, *Anyone who is sleeping is alive*. The standard explanation of the truth of such sentences is that the meaning of the predicate-phrase is already contained within the meaning of the subject-phrase, so that the sentence imposes upon the world a vacuous claim which cannot but be fulfilled. In a sense, we can think of the analytic sentences of a language as those sentences which are "asserted" by the language itself, as contrasted to those sentences which may be asserted on occasion by speakers of the language. Otherwise put, the analytic sentences of a language are those to which every speaker of the language is *de facto* committed: to reject an analytic sentence involves more than a mere change of beliefs—it involves a change in the meanings of some words, and thereby a change in the language itself. Thus, in a

¹⁰ An elementary survey of these paradoxes can be found in W. v.O. Quine, "Paradox," *Scientific American*, April, 1962; an excellent analysis of them appears in J. F. Thompson, "On Some Paradoxes," *Analytical Philosophy*, ed. R. J. Butler, (New York: Barnes & Noble, 1962).

¹¹ Rudolf Carnap, *The Logical Syntax of Language*, (Paterson, N.J.: Littlefield, Adams & Co., 1959), Section 60b.

¹² *Op. cit.*, p. 125.

¹³ See J. J. Katz, *The Philosophy of Language*, (New York: Harper & Row, in press). For a contrary opinion, see W. v.O. Quine, "Two Dogmas of Empiricism," *From a Logical Point of View*, (Cambridge, Mass.: Harvard Univ. Press, 1953).

¹⁴ Two simplifications of my discussion should be noted here. First, the notion of analyticity is restricted here to sentences which are grammatically of a subject-predicate structure. Second, the notion of analyticity is used here in a broad sense to cover all varieties of linguistic truth (truth that is derivative from the meanings of the component words).

sense, in order to reject an analytic sentence it is requisite to speak a different language.

A theory is constituted by a definite set of propositions which (borrowing from the terminology of formal theories) we may call "theorems." To say of a theory that it is logically inconsistent is to say that it is made up of a logically inconsistent set of theorems. The simplest way of understanding this condition is to imagine that two or more of the theorems of this set contradict one another, or that at least one of the theorems is a self-contradiction.

Inasmuch as the analytic sentences of a language may be thought of as its "theorems," we can apply these remarks to languages via their sets of analytic sentences. To say of a language that it is logically inconsistent is to say that its set of analytic sentences is a logically inconsistent set. This could be the case if, for example, the self-contradictory sentence *The word "heterological" both is and is not heterological* were analytic, as the paradox suggests.¹⁵

Some caution is required with regard to the notions of analyticity and contradiction when applied to the sentences of natural languages, due to the fact that natural languages are fraught with ambiguity. Indeed, it might be thought that this very indefiniteness would shield the language from any charge of contradiction. For the indefiniteness of any sentence would seem to carry over directly to the question of its analyticity or contradictoriness. But the latter supposition must be handled with care.

Consider a case where an apparent contradiction is resolved by reconstruction, as in *She is Irish and she is not*. The contradiction can be resolved by construing the two pronouns with different referents: *Kathleen is Irish and Rosa is not (Irish)*; or by construing "is Irish" in its first occurrence in legal terms and in its second occurrence in behavioral terms; or in various other ways. It is characteristic of natural language that sentences can bear two or more interpretations, and any satisfactory account of language must incorporate some representation of this fact. In current linguistic theory, alternative interpretations of a sentence are represented by the syntactic notion of a structural description of a sentence and by the semantic notion of a reading of a sentence.¹⁶

If a sentence can have two or more semantic readings, then it is possible for the sentence to be contradictory on one of those readings and to be non-contradictory on some other reading. This is exactly the case with the pre-

¹⁵ The condition of logical inconsistency of the set of analytic sentences coincides with the condition that at least one analytic sentence be self-contradictory, if we make the natural assumption that the set of analytic sentences is "deductively closed" (i.e., that every logical consequence of any finite subset of analytic sentences is itself an analytic sentence).

¹⁶ See Noam Chomsky, *Syntactic Structures*, (The Hague: Mouton & Co., 1957), and J. J. Katz and J. A. Fodor, "The Structure of a Semantic Theory," *Language*, XXXIX (1963), 170-210.

ceding example. The contradiction can be resolved by showing that the sense in which a particular occurrence of the sentence was intended was a non-contradictory one. It remains no less true that the same sentence on some other occasion could bear a contradictory reading.

Now if sentences can bear two or more semantic readings, it is at least theoretically possible for a sentence to be analytic on one reading and contradictory on another. It is not easy to find a convincing example of this, but the only use of such an example would be to discount it. In English we might propose the sentence *A young boy is a man who is not a man* (where "man" can mean "human" or "adult human male"). Needless to say, in the context of the present discussion when I speak of a sentence as being both analytic and self-contradictory, I am not thinking of an example of this sort. I shall be thinking of a sentence which is analytic and contradictory *on the same reading*.

If these distinctions are kept in mind, no harm will be done in what follows if I speak of sentences *simpliciter*, where it is obvious or indifferent which reading is intended.

Now if the set of analytic sentences of some language were logically inconsistent, then it would be impossible for every one of those analytic sentences to be true. It would follow that there must be at least one analytic sentence in the whole set which was false. But then there would have to be some sentence in the language which was true (by virtue of analyticity) and simultaneously false (by virtue of the preceding argument). But to maintain of some sentence that it is both true and false (on the same reading, of course) is to contradict oneself. And so the theory which asserts of a language that it is logically inconsistent is itself logically inconsistent, and thereby false. Hardly a more cogent refutation of any theory can be wanted. Thus it is that natural languages are inherently consistent: no acceptable theory of a language can maintain the language to be inconsistent, for we have at hand a general and conclusive refutation of every such theory.

Let us look at the matter from a slightly different point of view. Suppose that a linguist or philosopher were to claim to have discovered an inconsistency among the analytic sentences of a language, perhaps by deriving a contradiction from some subset of analytic sentences. But now this assertion rests on two claims: first, that some set *A* of sentences is analytic in the language; and second, that the set *A* is logically inconsistent. What the above argument shows, if it is correct, is that these two claims are logically incompatible. If in fact the set *A* of sentences is logically inconsistent, this would conclusively refute the implicit claim that the sentences of *A* are all analytic.

It might still be asked whether there couldn't be some *indirect evidence* of the inconsistency of a natural language. Consider, for example, a language

which we may call "English." Suppose that efforts to articulate a consistent set of analytic sentences for English repeatedly failed, and suppose this failure was not haphazard but that arguments could be brought forward in support of the proposition that these failures were due to a matter of principle which somehow was inherent in the very attempts. Under these circumstances, would we not be justified in asserting that the language was inconsistent, not in our original sense of actually containing some sentence which was both analytic and contradictory, but rather in this more indirect sense of resisting a consistent specification of its analytic sentences? The answer ultimately is negative.

In such a circumstance, a number of options might compete as means for resolving the issue. The general strategy, abstractly formulated, would be to challenge the theoretical framework which underlies our failure to arrive at a consistent set of analytic sentences. That failure by hypothesis results from a basic incongruity between our theory and the facts. We would be obliged to question the adequacy of the conceptual tools which have been brought to the task of describing the language. How deep this conceptual revision might need to go is something which can hardly be determined *a priori*. We can, however, survey the outcomes which conceptual revision might bring about. There are three possible outcomes, which can be classified by means of two dichotomies. Either we now succeed in specifying a consistent set of analytic sentences or we do not. If we do not succeed, then we would be obliged to question the sense in which the language can be said to have analytic sentences at all (the evidence being apparently negative). We could then decide either to abandon the concept of analyticity altogether or to retain it but in a modified form. The cases will be taken up in order.

Suppose that revision of the underlying conceptual apparatus is followed by success in specifying a consistent set of analytic sentences. Then the language is after all consistent, and our former failures may be set down as artifacts of an inadequate theory.

Suppose that the conception of analyticity is simply given up—that we acknowledge our failure to specify a consistent set of analytic sentences by abandoning the whole endeavor. But then if there are to be no such things as analytic sentences in the language—if there are to be no sentences which are true by virtue of their meaning—then the very concept of language inconsistency loses its sense, and the language is consistent by default.

Suppose, finally, that we can neither wholly abandon the concept of analyticity nor succeed in specifying a consistent set of analytic sentences. The only alternative left would be to modify suitably the meaning of the term "analytic" so that our theoretical aspirations might be brought into some sort of alignment with our descriptive capabilities. In particular, we would

require some way of divorcing the concept of analyticity from its truth-claim. We would be obliged to allow that sentences which are structurally and semantically analytic can nevertheless be false. Whereas formerly an analytic sentence was one whose predicate was semantically included in its subject and which was thereby true, the italicized phrase would henceforth have to be omitted. We might then come to think of analytic sentences as sentences having a certain semantic structure which rendered them *prima facie* true, that is, true unless their being so was ruled out on other grounds—in this instance, on logical grounds. Desperate as this alternative is, and paradoxical as it may sound, it is at least a theoretically conceivable alternative and so must be dealt with here. It does have a precedent in the theory of sets. One can specify sets by phrases such as “the set of all schoolteachers,” “the set of all neighbors of schoolteachers,” “the set of all used cars formerly owned by schoolteachers.” One might presume that any such phrase (of the form: “the set of all x such that Qx ”) would determine some set. But this presumption leads directly to a contradiction and thereby can be shown to be false.¹⁷ Set theoreticians have come to live with the fact that some but not all phrases of the given form do specify sets. Similarly, linguists and philosophers might conceivably come to live with the “fact” that some but not all analytic sentences were true. But once again, there would be no ground to support an inconsistency in language: for those analytic sentences which were inconsistent would in part be isolated among the “not-true” residue. This follows from the fact that mutually inconsistent sentences cannot jointly be true.

In each case, then, the language turns out to be consistent. It is an empirical question which one of these options might hold—which one of these alternatives would be most acceptable if the hypothetical situation ever arose. But the question of consistency turns out to be independent of our choice among these alternatives.

The fact that natural languages are inherently consistent does not mean that logical investigations into consistency are superfluous. On the contrary, such investigations provide a significant test for any proposed linguistic theory or semantic analysis of a language. If any semantic analysis can be shown to involve an inconsistency in accordance with the pattern outlined above, then this demonstration refutes the semantic analysis in question. Any semantic analysis of the sort we are envisaging¹⁸ will incorporate definitions and rules that specify a certain class A of sentences. A necessary (although

¹⁷ By way of Russell's paradox. Russell observed, in *Principles of Mathematics*, (Cambridge: 1903) that the set of all sets which are not members of themselves (presuming it exists) both is and is not a member of itself. Therefore, whatever our intuitions, there can be no such set.

¹⁸ See the paper by J. J. Katz and J. A. Fodor cited in note 16, and also works cited in note 22.

needless to say far from sufficient) condition that these definitions and rules be correct (in the sense that the sentences of the class *A* actually are analytic) is that the class *A* must constitute a logically consistent set of sentences.

We may consolidate our analysis by testing it in the following thought-experiment. We have so far considered only natural languages. Let us imagine now that we were deliberately to construct an inconsistent artificial language called "Lisheng." We lay down a set *R* of rules that specify first a set of well-formed sentences (syntax) and then a subset *A* of analytic sentences (semantics). We will so choose our rules that the set *A* turns out to be a logically inconsistent set of sentences. Surely, it will be conceded, we can lay down our rules as we please.¹⁹ But now suppose we were to teach this language to a group of people and let them become fluent speakers. Finally, let us imagine that a linguist visits the Lisheng community to study and describe its language by the customary field techniques. By hypothesis, the correct description of the language is given by the rules *R*. But the rules *R* determine an inconsistent set of analytic sentences. What is the linguist to conclude if not that the language is inconsistent? We have apparently constructed a counter-example to our previous thesis.

One of our assumptions must be incorrect. In fact the case is already a familiar one. If the sentences of the set *A* are definitely inconsistent, then it follows that they are *not* analytic and never were, despite our intentions. In Lisheng the set *A* may be distinguished on some structural grounds, but it cannot strictly bear the label "analytic." Even in an artificial language, the analytic sentences must necessarily form a logically consistent set.²⁰ The apparent counter-example collapses.

Our analysis can provide no solution for the logical and semantical antinomies. It can only free us from a false interpretation of them. It should be clear that no such antinomy, of the known sort or of any sort yet to be discovered, can show our language to be logically inconsistent. Nor can any of the antinomies be properly said to be "present" or "derivable" within natural language; for if they were, that would render the language inconsistent, which is impossible. True enough, almost anyone unschooled in the logic of antinomies can be persuaded of each step along the way to a contradiction. This shows only that widespread assent can be solicited for an unsound argument.

¹⁹ Thus, in his proposed explication of analyticity in terms of meaning-postulates, Carnap claimed that "it cannot be the task of the logician to prescribe to those who construct language systems what meaning postulates they ought to take. They are free to choose their postulates..." See his "Meaning Postulates," *Phil. Studies*, III (1952), 65-73.

²⁰ This point has not always been appreciated by philosophers of language. Thus Carnap in "Meaning Postulates" neglected to include a requirement of consistency. To his remarks quoted in note 19, we might reply that the logician does have the task of restricting the freedom of "those who construct systems" by prescribing to them what sets of postulates they can *not* accept on logical grounds.

If someone can be persuaded to assent to each step in an antinomy, then that person must be mistaken in part about the facts of his language. Philosophers who are inclined to the view that the facts of language are transparent to native intuition should ponder such mistakes.

It would be a serious error to imagine that the antinomies have nothing to contribute to our understanding of language. Quite the opposite is true. For example, Tarski has shown that the "liar" paradox can be attributed to certain semantic conditions. This antinomy arises in any language in which the usual logical laws hold and which is also "semantically closed,"²¹ and so any such language would be inconsistent. It may thereby be concluded that no natural language does in fact satisfy the antecedent conditions. If we hold the logic fixed, we may further conclude that natural languages are not "semantically closed"; this result has very definite consequences with regard to the semantic structure of language.

It remains to distinguish our question from certain others with which it might be confused. First, it may be observed that the meanings of words shift in time. Words may even undergo a diametric shift from one meaning to its opposite, as apparently happened in English with the word "objective." This may be historically accurate but it no more shows language to be logically inconsistent than the fact that Hegel's ideas were (once) new and (later) old shows an inconsistency in Hegel's thought.

Nor is the case for logical inconsistency advanced if someone can exhibit the same phenomenon at a single historical stage of the language. Imagine a language in which a certain phoneme sequence (which may be transcribed as *cholt*) was used to attribute hotness to some things (say, those heavier than air) and coldness to other things (say, those lighter than air). Would this render the language inconsistent? Not at all: it would merely render the word "cholt" semantically ambiguous. Oppositely ambiguous words contribute sentences of the sort previously alluded to, which have two different logically incompatible readings. Where we find such words, we may also find sentences which are analytic on one reading and contradictory on another. But the discovery of such sentences, as already noted, can hardly be taken as evidence of the inconsistency of language.

Finally, suppose there were a word which could be used to attribute opposite characteristics to the same thing. Suppose the word "cholt" meant something like "hot or cold" for objects of any density. In this case it seems that the word would not be oppositely ambiguous. Both hotness and coldness would somehow have to be incorporated into a single sense. But that can

²¹ See his paper cited in note 4, and also A. Tarski, "The Concept of Truth in Formalized Languages," *Logic, Semantics, and Metamathematics*, (New York: Oxford Univ. Press, 1955).

I

Autistic language use includes what Piaget has called ego-centricity, that is, a use of language that does not have as its motive the desire to affect any one but the user himself. There is no desire to make a message, to transfer a feeling or a thought from one brain to another. There is only the desire to make sound or to move fingers with a pencil in them for the joy of such behavior. We "like to hear ourselves talk." And a baby delights in his gurgling and babbling. We "write love letters in the sand." And a baby scribbles. (There are some who would call this kind of behavior "sick" at all times when indulged in by an adult. There are others who see it as one kind of self-amusement or release, not necessarily indicative of serious illness, unless it has become uncontrolled.)

If we are convinced that self-knowledge is a primary ingredient of growth, then for the teacher of the language arts the autistic motive presents an opportunity to involve students in a study of self-awareness. "What do your eyes see? What do your ears hear? What does your skin feel?" If we draw a circle on the blackboard with a dot at its center and ask our students to focus their eyes on the dot and tell us what their eyes see, they will usually report things that are inside the circle. They will see eraser marks, shadows. They will see imaginary wheels, spirals, an "all-seeing eye"; but for some time they will not report the rest of the blackboard, the teacher, the chalk tray, the heads of the students in front of them. When we call attention to "what else they see," we are making them actively aware of their own perceptions. If we ask them to keep their eyes fixed on the dot while we walk toward the back of the room, and to raise their hands when we pass out of their range of vision, we help them to *realize* that the eyes see more than 180 degrees. We can help them to understand the nature of attention, of focus, and of periphery in that way.

If we suddenly refer to planes overhead, during the reading of a poem, or to the sound of someone walking in the hall, when they are preoccupied with listening to our lecture, we help them to *realize* that they hear much more than they think they do. All the senses need to be sharpened in this way.

The same question, "What else do you see, hear, feel?" will be asked later when they are reading a story, listening to music, watching a play, or studying a picture.

These are first steps in widening the range of educated perceptions in students. And that is one of the means of extending behavior toward the goal of full, esthetic understanding of language used by others to affect us. As they see themselves, and are made to become interested in themselves and how they are and what they do and why they do it, human beings can be awak-

ened to a desire to continue to grow after they have left the formal school setting.

The means which the teacher will use for involving students in an awareness of their own behavior in language arts will be designed to stimulate students to build upon their perceptive abilities. The experiences provided by the teacher in this stage must be those which will call upon skills and interests already possessed, whether the student is conscious of them or not. For example, we may be relatively certain that a child has already developed an attitude or a series of attitudes toward the mother-child relationship. We may not always be able to predict his reaction, and we may not even assume that a reaction is to be forthcoming from every child at all times. We may, however, recognize certain common experiences among a particular group of children in a particular class, in a particular section of a state, in a particular nation, at a particular time. If we present to such a class a photograph of a mother and child in some relationship, we may expect a number of reactions from our students. If the scene is one of tenderness, we expect it to evoke a reaction of recognition first, then perhaps identification, and even, in some, envy. What we wish to do at this stage is to evoke *any* reaction, and to help the student become aware of his reacting and, through that, of himself. We say, therefore, "Look at this photograph. What does it make you feel? Don't try to tell me; just think about what you are feeling as you look at it."

For at this point, since we are in the autistic phase, we do not expect nor even want the student to report his feelings. The danger is that the concern of the student over "what to say that the teacher will accept and mark me well on" almost has to interfere with basic thinking, until a facility for that kind of translation has developed. And there can be no adequate communication in the symbols of language until thoughts are sensed and transformed into meanings so that specific words can be assigned to them.

"Listen and think," we say to the students. "Look and think. Read and think." And by *think* we also mean *feel*, but we want them to think *about* their feelings too. All of these assignments by the teacher are meant to feed the autistic motives of the students. We are really saying, "Look how much you can enjoy what you are doing." And this is true even when the feelings and the thoughts stimulated by the events we bring them into contact with are painful ones touching memory associations that were once sorrow or hurt. What develops with maturity is the ability of the human being to control his awareness of these emotions. The development of such sophistication proceeds along with the growing facility of the student to incorporate his autistic feelings into the later phases of communication, analysis, and esthetics.

When the teacher can successfully evoke this kind of self-awareness, providing stimuli through situations that will tickle a desire to respond and an interest in experimenting with writing for the self's sake, then no effort to collect, read, correct, or even evaluate the writing can take place. We say, "Write whatever you want; use whatever words you want and in any combinations, grammatical or not. Just get down on paper what is *inside* of you wanting to come out."

We have to acknowledge to them that we know that there are other ways for such feelings to be expressed. There are inchoate screamings and the wild thrashing about of a tantrum. There are also ways of making sounds wonderfully expressive to the self on the keys of a piano. There is music not written nor even improvised out of a deep knowledge of musical relationship: just the banging on the keys for anger, or the stroking of long and soft notes for tenderness; deep, resonating ones for death, and high tinkling ones for felicity. Whatever sounds have become associated with particular emotions for a single purpose in a single individual, those sounds are also the symbols for expressing those emotions.

The same is true for using color and line. Wild splashes can be anger. Yellow is soft. Red is violent. Blue is night and stillness and cool. Not for everyone, this assignment of symbols, any more than we can universalize musical noises, though now and then we can find a common system among a group of students, all conditioned by similar experiences in a common society. When we can discover such a system we have made easier the later task of establishing the existence of language conventions which have to be learned. Let it be made clear at this point that many students, indeed most students, are already aware of the conventions. Many of them are already bound in by the rules which have governed their use of language for the first six to ten years of their formal schooling. For them the need is to escape from the conventions, to become aware that the mind does not have to react grammatically. "Look," we say to those, "just write whatever comes into your brain. And when you are finished, then read it over if you want, or burn it because you don't want anyone to see it by mistake, or you may not want to look at it yourself. It came out of you and it can be thrown away because all we want you to experience is the feeling of getting it out on paper."

We also listen, as well as write, for autistic purposes. We can be pleased with the mellow droning of a voice, excited by the meaningless sounds of a dictionary or telephone book when an accomplished actor is reading it, where the words are not communicative but the tones are. And we read for autistic purposes, again not concerned with deriving meanings, but merely receiving the stimulations which touch associative memories and other structures in our brain cells.

The teacher makes use of autistic reading by again inducing the student to read and to be aware of his feelings and his thoughts. We say, "Just read and see what happens to you while you are reading." The stories selected for this purpose must be stories of impact, those which make possible meaningful responses, and that means emotional responses. "Watch yourself reacting," we say, having first given one or two illustrations. The illustrative experiences begin with the kinds of reactions students can easily become aware of in themselves. Certain pieces of modern dance music cause them to move their legs and their shoulders. Why? What do they feel inside themselves that finds its way out in the physical gyrations and tremors which they call dancing? Have they ever felt sadness during a television play or a movie? Why? And did they enjoy it?

They talk about *rhythms* to which they respond. They might discuss their feelings about *sorrow* and *death*, and in the discussion we can point to those emotions which men seem to share because of physical and cultural similarities.

When we turn them to short stories for autistic experiences, we are encouraging each student to read in his own way, with no attempt to force him to find ideas and feelings that are being directed to him by the author. If we ask them to record their reactions with one-word clues, it is not because we wish to examine them or grade them; it is because we wish them, again, to see themselves reacting, thinking: being alive, if you wish.

II

When we move to the second aspect of language motives, the communicative, there is a shift of emphasis. Now, man is using language to transfer a feeling or a thought from his body and brain into someone else's body and brain. This interchange requires that there be some medium, understood by both parties, containing symbols and order. But the symbols and order need not be of such a nature that they can be understood by anyone outside the circle of those among whom the communication is expected to take place. For that reason misspellings, provincialisms, ungrammatical constructions, and other violations of language decor are not important, unless they interfere with the communication itself. A misspelling that changes the meaning of a sentence is important, just because it operates against the writer's motive, namely, to be understood. Punctuations which alter meanings need to be noted for the same reason, and provincialisms which are not understood by the reader of the communication must be eliminated.

Thus, the teacher operating in the communicative stage does have the

responsibility of helping the student to see clearly the inadequacies of the work. When one comes with a piece written for autistic purposes, asking that it be read (and there are always students who do want to be read), the answer ought to be, "I will if you want me to, but have you written it so that I will understand it, or is it written so that only you can understand it? If you didn't have me in mind as your audience when you were writing it, you may have to make changes."

The changes are a movement from language for self to language for someone else. In speech, as in writing, it is the audience and the relationship between writer and reader or listener that determines the kind of language utilized. If two boys are talking together on a street corner, the range of their vocabulary is unlimited. It may begin with certain grunts and groans and hand gestures which have meaning for both of them, and may extend as far as the most sophisticated of stylistic constructions. The determinant is the ability of each partner in the communication to derive meanings that work.

Even in the classroom, such language use does not include adherence to prescribed rules of grammar and usage. The restrictions are imposed by the language conventions of the particular moment, and by the student's understanding of a social situation where certain words, permissible on the street corner, are likely to be disturbing in the classroom. Most young people learn quickly and outside of school that such words offend and for that reason interfere with communication.

There are other skills which begin to acquire importance at this stage. One almost needs to understand the logic of a small community in order to communicate within that community. This is still not a matter of laws, or styles, or fixed rules. It is a matter of local agreements because, as man begins to want to exchange thoughts and feelings with other men, he is forced to widen the circle of meaning and to find ways of restricting the wild, self-meaningful utterances to those noises which have meaning for others. As the circle widens, the conventions become more restrictive.

We say, therefore, "If you want to be understood by people who live outside our neighborhood, then you will have to eliminate words that have meaning only here, among us. If you want to be understood by people in England, then you will have to eliminate or change words that are understandable only in America."

When we turn to the taking-in process in the communicative motive, what is wanted is a derivation of meanings from the listening and the reading. It is not enough now to receive stimuli to which we respond, or to react for our own sakes only. Now we are concerned with receiving that which the speaker or writer intends us to receive. The skills to be developed are skills of interpretation and understanding, and these require that the listener or reader deep-

en his awareness of his reactions by considering them in terms of the motives of the speaker or writer.

Again, the conventions are determined by the width of the communicating circle. How much does the student have in common with the writer of a story? Our teaching of Shakespeare is defeated, all too often, because we are deceived into thinking that a mere translation of an obsolete term into its modern equivalent will suffice. What needs to be translated is the entire range of experiences from which Shakespeare derives his meanings for the words he uses. The reading of authors like Hawthorne, Melville, or even Poe requires several levels of preparation to be effective. And it is not only the language that needs to be learned, but the customs and the traditions and the values and the ways of thinking that are different from those of the classroom readers. The differences have to be examined if there is to be real communication; otherwise we are forced into teaching on a non-meaning level, where questions are answered by a repetition of words in the text, where the words themselves have nothing to give but high grades in a marking book.

There are communications which go beyond the cognitive into the emotionally evocative. Receiving emotions intended by the writer is taught through examinations of writer and reader purposes, which again are seen as man's behavior with language. Children must learn to respond to tones in writing as well as in speech, to read anger as well as hear it. "When your mother shouts at you, telling you to get lost, does she really mean those words, or is she saying, 'you've made me angry!'" "When one boy curses at another, saying a *bad* word, does he mean the word itself? Or is he merely telling how he feels?" (And *bad* here is being used within a convention, because at some time or other we ought to let our students know that words cannot be *good* or *bad* except as using makes them so.)

III

When students have accepted the pleasure to be derived from the autistic uses of language, and have understood the communicative purposes, they can be led to see that language serves a third motive, the analytic. We use language to describe the events in the world of which we are a part. We use language to create categories by which we examine and come to understand what we can experience and describe. We use language to develop the abstractions we are capable of making, by extensions of our descriptions and categorizations from things experienced by our nervous system into things beyond experiencing. The awareness of this process and of some of the more formal methods of achieving our ends can result from our understanding of

the formal disciplines of grammars, regardless of whether we work through traditional Latin-base systems or the newer systems of the various linguists.

That there is order to man's use of language cannot be denied, just as it cannot be denied that there is order of some kind in man's use of food. The particular order may be, for the most part, a development of culture and civilization; but to the extent that we can determine certain apparent laws and generalizations of linguistic behavior, just so much can we expect to pass on to our students *when it becomes necessary*. And it becomes necessary only when we have helped them to see a clear need for such knowledge. To insist upon standards because "there must be standards" is to employ tautologies which can never convince. To support such insistence, educators develop the penalty system of testing and marking, deliberately utilizing fear as motive. A more reasonable structure is based upon the motives which have already been developed in the context of a given culture.

The same must be said of rhetoric and criticism. They are not "a priori" systems to be obeyed in order to avoid punishment. Rather, these forms of analyzing speech and literature are to be introduced only when they become necessary for the deeper understanding of the author's style and method.

As one wishes to communicate with wider and wider audiences, one has to restrict his use of language to the conventions which are more broadly understood among the users of the language in all parts of the world. But as one widens the geographical areas in which the audiences are located, one also narrows the number of individuals who are prepared to understand. Though the languages of mathematics have become more universal than any other languages used by man, they are also capable of being understood, in the highest reaches of their expression, by the smallest number of international users. On the level of daily use, however, numbers are used almost universally. To do this they have been made more restrictive than words, so that meanings are precise and clear and contained within the systems invented by men and studied by other men who wish to receive and give communication mathematically because of the kinds of expressions made possible only by those systems.

This is also true for some users of the language tongues and scripts. There are forms and styles which serve specific purposes. The relationship between the motive and the writer and the method of his writing can be taught. The relationship between the nature of the event to be dealt with in the writing and the kind of writing attempted can also be shown. And this process can be directed toward the notion that the subject matter being taught and the motive for the teaching both direct the methods by which the teaching is to be done.

Why, then, does a poet write the way he does? What is accomplished with

such a subtle use of language that cannot be accomplished in prose which is usually easier to understand? These are student questions. The first experiences with poetical forms for many students were probably those jingled repetitions of sound which they made up as little children learning words. If they have become name-conscious, and if language games are part of their world, then Charlie-Parley, Joey-Moey, Amy-Lamie are the inventions they use for amusement and also as ways of remembering. They learn that some words "go" with other words, because of sound usually, although sometimes because of a confluence of ideas. The poet uses this knowledge to express ideas and feelings which prose cannot express as well.

Later, as language use develops with the increase of experiences in life itself, and the mind becomes aware of many kinds of relationships, of distinctions and congruencies, language amusement is extended to include being told stories, and then being read to, and finally reading. In the same way, language has been developed as a means of being directed by those who, in the culture, are authorized to direct. The child's parents "give orders": instructions, warnings, encouragements, suggestions. They also seek information, wanting to know how the child feels, what he thinks, what he wants. Gradually the child comes to know the forms of statements. He learns to distinguish more than tone or the gesture which accompanies the sound. He learns that the words are different, and the purposes behind the words.

In the analytical stage, then, it is time to introduce the study of forms. There have been stories, and essays, and poems, and plays in the experiences of the student. If they have been experienced in ways consonant with the motives of their writing, they have been communicating the thoughts and feelings which the writers desired communicated. Now we are concerned with the "formalities" of styles and forms. It is a province of the analytical stage to be prescriptive, to teach deductively, presenting such forms and styles for analysis and for imitation. We say, "Read this poem. React to it. Recall your reaction. What does it communicate to you? What does it communicate to other people? What might we say the author wanted to communicate? Has he succeeded? How did he do it?" And it is with the last question that we must deal in this stage of analysis. Obviously, then, induction is still present as a means of bringing about understanding of forms; but we go further into deductions when we apply the laws of sonnets for example to new sonnets, or when we single out a work to determine whether it is an Aristotelian tragedy or not, or when we classify an essay as "familiar."

IV

The final stage and motive is the accumulation of the first three, and we call

it the esthetic motive. The reader or listener has learned to read and to listen because there is pleasure involved in his awareness of himself and his reacting. He has learned that there is a need for him to receive communication, to understand because he has read and listened analytically and because he has learned to derive intended messages through his knowledge of words and structures. He has learned that there are forms and styles and ways of examining them and what is being said, but also what is being done to him, that go beyond the meanings of words into the emotions aroused by language. And, if we have succeeded, he reaches that final stage of language use wherein he enjoys the entire process, is capable of evaluating a work in terms of what we call its artistic achievement. This is where the teacher and the students regard a work together, sharing enjoyments and ideas, bringing multiple experiences to bear on the enrichment of the listening and reading.

In the same way, the student has learned to write for its own sake and to communicate his ideas to others, to widen the circle of his audience to include not only those who understand his own provincial jargon but also those who are capable of working in the more formal world of English by separating themselves from their own jargons. He has learned that he can describe and categorize and conclude and evaluate in speech and in writing. And again, if we have succeeded, he has developed an ability to enjoy performing in language and sharing his performance with those who have learned to appreciate. His work becomes, for the teacher, one more poem, or essay, or short story to be appreciated in the sharing of the group. And this sharing, as it contributes to the acquisition of new knowings, is our goal. It may even be considered the final justification for man behaving in language.

V

The structure, as presented here, can be entered into at any stage of student development. With students who have already acquired a sophisticated use of language, who are capable of writing clearly, stylistically, one wonders whether they have ever been permitted to experience an autistic moment, when what they have written has had no other motive than expression. It may be that they will require less experiences of this kind to serve as a means of freeing them and helping them to become aware of their own processes. With those disadvantaged children whose language use has been restricted to grunts, groans, moans, and occasional namings, much more time has to be spent helping them to learn that they are capable of reacting, that their reactions can be stimulated, and that those reactions can come out of language experiences.

The stages, we have said, are cumulative. They are also intermingled, so

that some analysis takes place even as the child begins to look at his reactions and at his autistic writings. This is because, from the very beginning of his experiences, reading faces from his crib, he has been noting similarities and differences and has been making conclusions about meaning.

To summarize in terms of teacher behavior: writings done for autistic purposes are not even to be read, unless a student requests it. And then, they must not be corrected or evaluated or responded to in any way unless such responses are directly called for by the student. One must not say, "I don't understand it." One can say only, "I know you did not write it for me to understand, did you?" And this must be said in such a way that absolutely no criticism is implied. No "points" can be deducted where a student has not been trying for "points."

Writings done for communicative purposes must be corrected only in so far as they fail to serve the purpose for which they were intended. To correct spelling when it does not interfere with communication is to change the emphasis from meaning to form. One says, "I do not know what you mean here: can you change it to make it clear?" Or, "I think I know what you mean, but I don't think you're saying it so that there is no possible chance of misunderstanding."

Writings done for formal, analytical purposes are subject to all kinds of correction and evaluation. Here, we have said, form is important. Now, we may call attention to errors in form. The errors either restrict communication, or they inhibit appreciation, or they carry with them the image of one who is less than well-educated in the opinions and the standards of the better educated language community. Thus, if a student is motivated to care about the image his work projects, the teacher is authorized to reject his failures and to help him improve.

Implicit in this approach to the teaching of the language arts is the contract between teacher and students. Each expectation is clearly understood and the teacher responds to performances made under the terms of the contract. It is not permissible for a teacher to solicit opinions from the students and then mark opinions wrong. Neither is it permissible for a teacher to say, "I want you to write what you feel, because that is what is important," and then correct or mark down spelling and grammar. On the other hand, when we have included in the terms of the contract such techniques as style and form, then there are no limits to the kinds of standards the teacher wishes to impose other than the abilities of at least the best of the students to perform, to behave in language.

The Editorial Board welcomes comments on articles, reviews, and letters that have appeared in the Review. Communications should be addressed to: Harvard Educational Review, 13 Appian Way, Cambridge, Mass. 02138. Letters from readers will be published at the Editors' discretion.

To the Editors

PHILOSOPHICAL MODELS OF TEACHING

To the Editors:

It seems to me that the main lesson to be gained from Professor Scheffler's interesting and valuable essay is the futility of employing models of the mind.* This is established by the fact that in describing the psychology of the learning process, he found it necessary not only to combine what he regards as three classical models but also to expand and elaborate them most generously, indeed, until they are hardly recognizable. The end product is still a somewhat stilted and artificial description of the learning process compared to what Professor Scheffler would come up with if he ignored the models. To this it can be objected, of course, that the models which he selected all belong to the past and their original constructors (though he does not claim to be true to the originals) were without

today's knowledge of the intricacies of the mental processes. I would still insist, nevertheless, that with the best knowledge now available it is impossible to fashion a model for the mind; the mind just isn't the kind of thing that lends itself to modeling. To have shown that this is the case is the great merit of Professor Scheffler's paper.

Now I don't mean that there can be no value in getting at the nature of the mind and its functions by thinking in terms of models, as long as the distortions due to oversimplification are clearly recognized. By this technique, subtle problems can be clarified by being made less subtle. The task here is to avoid supposing that the problems are as simple as the models make them appear to be. Professor Scheffler, of course, acknowledges the problem of oversimplification.

Granted that Professor Scheffler is not willing to settle for any one of the classical theories, my main concern with his paper lies in what seems to be his tendency to describe the task of

* The letter refers to Professor Scheffler's "Philosophical Models of Teaching," (HER, Spring, 1965).

teaching primarily in terms of the conception of the mind. Indeed, the title and apparent intent of his paper contribute to the general notion that the theory of the mental process is the most appropriate ground on which to consider education. My objection is that this approach to education, which has dominated educational thought in many circles and appears therefore to be entirely obvious, fails to do justice to the full scope of the educational problem. It more or less turns everything over to psychology and tends to rob education of its proper relations to such disciplines as sociology, anthropology, and philosophy. I think Professor Scheffler's paper clearly exhibits the somewhat strained character of this situation, for he finds it necessary to do a great deal of pushing and pulling to get the substance of education to conform to his compound of models. I don't deny the importance of psychology for educational theory, and I'm quite ready to grant that Professor Scheffler's paper goes beyond psychology to what might be called the philosophy of mind. But I believe my point is still valid, that neither the science nor philosophy of mind should be taken as the format into which the whole discussion of education should be squeezed. I'm sure that Professor Scheffler does not intend this, but some others clearly do. The philosophy of education must be freed from its all-too-common bondage to psychology. The determination of the ends of education, for instance, is not a psychological issue. Nor is defining the substance of education. I do not mean to say that psychology is not importantly relevant to these, but I certainly would insist that its relevance here is quite different from its relevance to the methods of education. The dominance of psychology in educational thought has too of-

ten meant the subservience of ends and substance to means, an unbearable situation whether in education or any other department of culture. This has produced a technologically-oriented theory of education rather than one oriented to ends and purpose.

There are a few odds and ends that I think deserve further comment from Professor Scheffler. Does he really intend, for instance, to accept the Platonism that seems to be implied by his apparent going along with the notion of *insight*, as indicated in his discussion of Augustine? If I'm not mistaken, this calls for some kind of doctrine of innate ideas. And what he means by *insight* does not seem to be any clearer than St. Augustine's *vision*. Without the Platonic metaphysics it seems to be less clear, and I can't determine where he stands on the metaphysics. I'm not concerned with Augustine's views, but what does Scheffler mean when he distinguishes between *information* and *knowledge*? It's a little shocking to find him saying that new *knowledge* cannot be conveyed by statements. Nor does it clarify the situation to bring into the discussion the student's "personal engagement with reality." This seems to call for some sort of schoolroom mysticism. For instance, how does one "through one's own effort," or through the engagement with reality, earn the right to convert into knowledge information about the chemical structure of the stars? Does Professor Scheffler mean to suggest that knowledge is information attended by some kind of subjective personal conviction, or that knowledge is something incorrigible while information is corrigible? I must confess that I find this whole discussion of insight and knowledge somewhat confusing—unless, of course, he is getting at something like the old distinction between "knowledge about" and

"knowledge of," but it seems to me that this is not quite his point.

Professor Scheffler says that "Vision is just the wrong metaphor" and he's entirely right. But he seems nevertheless to go along with the whole business of insight without giving it a clear meaning. I have a similar difficulty in understanding what he means by *principles* in his discussion of the Kantian model as well as in his conclusion. The criticism of Locke, Augustine, and Kant is well taken and is valuable, and I like the way Professor Scheffler has played them against one another while attempting to salvage something of importance from their basic concepts.

STERLING M. MCMURRIN
University of Utah

PHILOSOPHICAL MODELS OF TEACHING

To the Editors:

There have been a number of recent attempts to develop a concept of teaching which stresses both the intentionality of the teaching act and the growth of critical judgment in the learner. Although I believe that, in general, these accounts of the matter are correct, they are all founded upon the denial of an assumption which seems to me to be fundamental to any concept of teaching, namely, that one of the aims of teaching is to bring about changes in the behaviour of the learner. Because the consequences of rejecting this assumption are so serious, I feel sure that the writers whom I wish to discuss would not wish to accept them; yet from what they say it does appear that they are committed to them if only from inadvertence. This, then, is the puzzle which I would like to discuss.

The issue can best be highlighted with the aid of three quotations. T. F.

Green argues that the

... dogma that the aim of teaching is to change behaviour is both patently false and dangerously misleading. The aim of teaching is not to change people's behaviour, but to transform behaviour into action.¹

Peters comments as follows:

This is acceptable enough in that it constitutes an attack upon the Behaviourist tendency to regard teaching as a way of 'shaping' people's behaviour towards ends which are unsupported by argument by methods which are morally dubious.²

This is in line with the view expounded by Peters on a number of occasions in recent years, notably in his inaugural lecture:

The teacher is not a detached operator who is bringing about some kind of result in another person which is external to him. His task is to try to get others on the inside of a public form of life that he shares and considers to be worthwhile.³

Scheffler (who quotes Peters with approval) clearly supports what he calls the 'rule model' of teaching:

Teaching, from this point of view, is clearly not, as the Behaviourists would have it, a matter of the teacher's shaping the student's behaviour or of controlling his mind. It is a matter of passing on those traditions of principled thought and action

¹ Green, T. F. 'Teaching, Acting, and Behaving,' *Harvard Educational Review*, 34, 1964, p. 517.

² Peters, R. S. 'Discussion on Green,' *Harvard Educational Review*, 35, 1965, p. 198.

³ *Education as Initiation*. London: Evans Bros., 1964.

which define the rational life for teacher as well as student.⁴

Both Scheffler and Peters seek to define 'education' in such a way that the concept of teaching can be clearly distinguished from activities such as conditioning and indoctrinating. In their eagerness to castigate the Behaviourists, Scheffler and Peters are constantly plugging for a distinction between what might be called 'mental manipulation' (which is never justifiable in their view) and 'induction into rationality' (which lies at the centre of their concept of 'education') yet they fail to explain how any adequate account of the latter process can be given without reference to behavioural change.

I do not wish to deny that this is a vitally important distinction but there are two major difficulties which arise as a result of the ways in which it has commonly been stated: the grounds upon which it is founded have not been made sufficiently explicit; it encourages us to throw out the baby with the bath water by watering down the amount of 'influence' which the teacher may legitimately exercise in the classroom.

Both Scheffler and Peters use the term 'shaping' pejoratively so as to suggest a repugnant image of an operator manipulating a learner in much the same way as a sculptor might structure an inert piece of clay. This, they say, is what the naughty Behaviourist wants to do with his pupils. The language in which they expound their own position is much more congenial and heartwarming: the benefits of the rational life are to be 'shared' and 'passed on' by the teacher to his pupils. Leaving aside the loaded way in which the

case is presented, there are logical reasons for objecting to it. Consider the passage quoted from Scheffler's paper. What would be the point of passing on traditions of thought and action unless we intended to change people's behaviour in such a way that they came to act in accordance with them? Surely these traditions cannot *now* define the rational life for the student, for otherwise would it not be foolish for us to spend time educating him in such a fashion that they come to do so? That is to say, the teacher must at least have the intention of bringing about changes in the behaviour of the learner. 'Passing on' must surely mean more than simply exposing or introducing the student to certain modes of thought; otherwise there would be nothing odd in a teacher saying to his students: 'I am now going to teach you some rules of logic (or grammar) but I don't care whether you conform to them or not.' In other words, the notion of 'concern' is an indispensable element in any concept of teaching: whether we speak in terms of 'shaping' or 'introducing' makes no difference; it still refers to an intention on the part of the teacher to change the behaviour of his pupils.

The concept of teaching involves not only acting intentionally in order to achieve certain ends but also some knowledge of the nature of these ends and criteria against which the achievement of them can be measured or evaluated in one way or another. I do not see that we can make any sense of this without attending to behavioural changes exhibited by the learner. What educator would wish to teach principles which were *never* exemplified in the behaviour of the learner? Without arguing one way or the other about Behaviourism, I still want to insist that the teacher's prime concern is with the behaviour of his pupils: only those who

⁴ Scheffler, I. 'Philosophical Models of Teaching,' *Harvard Educational Review*, 35, 1965, p. 143.

have never taught young children could possibly suppose otherwise. He seeks to extend their repertoire of knowledge, to improve their skills, and to encourage them to become courteous, honest, kindly, and so on. In large part his aims are conceived in terms of behaviour and his success or failure is certainly judged in the light of the behaviour of his pupils, both by himself and by others.

To claim this is not to say very much. The really important questions begin when we ask what kind of behaviour we seek to encourage and in what ways it can best be fostered. The fact that answers to these questions rarely rise above the level of what has recently been called 'the educational rhetoric' I take as evidence that we need more rather than less behaviourism in education. And by 'behaviourism' here I mean nothing more than a vigorous determination to set out clearly and in detail what we expect the student to be able to do when we have finished teaching him what he could not do when we began. Educators have been notoriously lazy in this regard and there is a real danger that they will be able to justify their idleness by appealing to the view put out by Scheffler and Peters.

One final point. Are teaching and indoctrinating really such radically different activities? It is fashionable to suppose that they are; hence the search for unambiguous criteria which will distinguish them. But most of the discussion of this topic is conducted in terms of a model of teaching which is wildly unrealistic: the paradigm classroom situation appears to be one in which the teacher is calmly expounding a Euclidean theorem or the rules of grammar. But this is to ignore a great many other teaching activities which are both characteristic and highly valuable, activities which involve beliefs,

emotions, exhortations and enthusiasms. These less 'cerebral' aspects of teaching tend to be undervalued and we feel uneasy about discussing them because they quickly lead to disputes which involve our own attitudes and convictions: it is much less troublesome if we restrict our talk to 'traditions of principled thought.' Yet when we look back on our own education, the teachers we remember with gratitude are those who communicated to us their own beliefs, opinions, enthusiasms and convictions with passionate (doctrinaire?) eagerness and a profound concern that one day we should come to share them. Any concept of teaching which excludes this has sadly missed the mark.

JOHN P. POWELL
Australian National University

TEACHING THE TELEPHONE DIRECTORY

To the Editors:

Welcome to the fun and games of educational satire, Messrs. Harmin and Simon! You will enjoy some rewards, notably your own private amusement as, long after this issue is tidily bound, your witty item is illicitly reproduced and circulated hand to hand by kindred spirits almost as though it were pornography back in the days before pornography became freely available in stores. But like the fun and games of Albee's characters in *Who's Afraid of Virginia Woolf?*, there are perils and pitfalls, too. Expect no salary increments or raises in rank through the production of such pieces, young men: The Establishment frowns on unscholarly madness. (Current definition of The Establishment: anybody anybody else doesn't like.)

On the surface, *The Year the Schools*

Began Teaching the Telephone Directory would seem to require no exegesis. I have shown the article to the current college generation as well as to the ancients, and all have guffawed heartily. The college generation apparently sees the relationship of the article's directory to the telephone directories which have been duly mastered by them in many of their purported liberal arts or education courses. The ancients apparently get the point too, including my friend who is developing an aural-oral device to be placed under the mattresses of pregnant women to teach prenatal French. But your editor has invited my comments, so I shall try to provide the skeleton key to your *Finnegan's Wake*.

To anyone searching for the clue to what you might be saying, I recommend study of the collected works of J. Abner Peddiwell, Ph.D., Petaluma College. Particularly worthy of study is the Peddiwell major opus, *The Sabertooth Curriculum*. The first curriculum, as all Peddiwellians know, was invented by a caveman named New Fist, and was made up of fish-grabbing with the bare hands, wooly horse clubbing, and sabertooth tiger scaring with fire. The schools taught these three fundamentals systematically, and the students presumably learned the structure of these disciplines. The tribe was well fed, well clothed, and free from fear. But a glacier came down from the north and the stream that ran through the caveman's valley grew muddy. Fish could not be grabbed with the bare hands, the wooly horses went far away, the sabertooth tigers caught pneumonia and almost died out. In the new era, men made nets to catch fish, snares to trap speedy antelopes, and pits to trap the ferocious glacial bears which were unafraid of fire. But, of course, the schools continued to teach fish-grabbing with the

bare hands, wooly horse clubbing and sabertooth tiger scaring with fire. Net making, antelope snaring, and bear trapping were regarded as unworthy endeavors for education. The conservatives maintained tank schools with warmly heated fish tanks for fish-grabbing with the bare hands, while the progressives introduced the "real creek" school of fish-grabbing—naturally, still with the bare hands.

But all of your readers may not be students of Peddiwell. Nor can you expect all Peddiwellians necessarily to master your neat switch through which an innovation, rather than outworn supposed fundamentals, symbolizes meaningless content. So expect some misinterpretations.

Let's hope your article is not interpreted as badly in 1965 as was John Hersey's *The Child Buyer* in 1960. Hersey's satire concerned the attempt by a child buyer for industry to purchase Barry Rudd, a brilliant ten-year-old, in order to use his brain in the service of United Lymphomiloid and its Fifty-Year Project. Hersey spelled out his message through his fictional spokesman for education, Dr. Gozar: "It's a failure of national vision when you regard children as weapons and talents as materials you can mine, assay and fabricate for profit and defense." Yet many reviewers regarded the book as basically a criticism of education and "educationists," not as the forceful criticism of society and social forces which the book clearly was.

Once, during the McCarthy era, I wrote a column called *The Climate of Fear* in which I satirized the policies and methods of right-wing extremists as explicable only by the theory that the Communists had infiltrated the American right. To my amazement, some readers wrote me in dead earnest about rightists whom they believed to

be actual representatives of the Communist Party.

Maybe teaching the telephone directory might even achieve respectability through inclusion in somebody's list of the latest innovations to be emulated. Better watch for it!

WILLIAM VAN TIL
New York University

LINGUISTICS IN THE TEACHING OF ENGLISH

To the Editors:

Sometime ago in these pages (HER, Spring, 1964), H. A. Gleason, Jr. asked the question: "What Grammar?" The reader soon learned that the question was misleading, intentionally so, and that Gleason was really interested in suggesting five ways "to work in building a grammar for the schools." Gleason, of course, is a syncretist, or would like to be one. He sees the dichotomy between traditional and structural grammar as "meaningless," and he expects the dichotomy between transformational-generative grammar and structural grammar "to disappear." He holds a utopian view of the future in which teachers have restored "the relevance and the intellectual challenge of the English curriculum." And looking the other way, he sees the history of linguistics as being "within the purview of an educated man." But like Keats' Cortez, Gleason seems to be the wrong man on the wrong mountain at the wrong time. He may even be facing the wrong way.

Peter Rosenbaum is not a man on a mountain. Quite the contrary. His article, "On the Role of Linguistics in the Teaching of English," (HER, Summer, 1965), suggests that he is both level-headed and down-to-earth. His article also suggests that he is looking the right

way at the right time. The things that he sees and says are important for all teachers of English.

Rosenbaum briefly, successfully, and (let us hope) permanently answers Gleason's question: of all available descriptions of language, only transformational grammar can be said to be "right or wrong, valid or invalid, true or false." A structural description is "inevitably nothing more than an arrangement of the data which makes no claims whatever about the nature of the data." That is, and to say it one more time, structural grammar is taxonomic and cannot have more than a trivial relevance to an integrated English curriculum. Transformational grammar, on the other hand, is "a verifiable linguistic theory and description of the structure of English." This, certainly, is the strongest claim that can be made for selecting a grammar to include in an integrated curriculum.

But this still leaves the most important question: why should students study grammar at all? It is in providing a few answers to these questions that Mr. Rosenbaum's article achieves its primary significance. He gives two kinds of answers, and surely they are the most important kinds: humanistic and pragmatic. First, transformational linguistics "yields new insights into human intellectual capacity"; language is one of the most important things which "make human beings human" and is, therefore, a subject worthy of study in itself. Second, transformational grammar enables a teacher to define the "canons of good writing," to show how these canons sometimes conflict and otherwise interact, and to develop means better than those hitherto available for effecting "changes in linguistic performance."

My only objection to these answers is that Mr. Rosenbaum does not go far

enough. He might also have said that transformational theory provides a basis for evaluating a child's linguistic sophistication. That is, it is possible to isolate at least some of the features which make the language of older children more sophisticated than that of younger children. It should be possible to incorporate this information in developing methods for increasing the linguistic sophistication of young children.

Since transformational theory is verifiable, we can use it to increase a child's self-confidence in his ability to speak and write his native language. Too many children believe that they "don't know any grammar" when, in point of fact, their total grammatical competence is greater than linguists are yet able to describe. No one has yet proved that greater self-confidence leads to more sophisticated performance (although I'm Emersonian enough to believe that this is true), but it is certain that lack of confidence adversely affects performance.

Finally, Mr. Rosenbaum might also have said that transformational linguistics has many applications in the study, teaching, and criticism of literature. Richard Ohmann has demonstrated this several times. Lack of space inhibits me here, but it can easily be shown that transformational grammar can also aid us in discussing metrics, poetic "tension," and the syntactic oddities of such poets as Cummings, Emily Dickinson, and Dylan Thomas.

It is wrong, of course, to criticize Mr. Rosenbaum for writing an article instead of a book. But English teachers, like *Oliver Twist*, are insatiable; we want more. I hope Mr. Rosenbaum will oblige us soon.

OWEN THOMAS
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CICERO: EDUCATION FOR *Humanitas*

To the Editors:

In his article "Cicero: Education for *Humanitas*" (HER, Summer, 1965), Robert R. Wellman has shown how remarks from various parts of the Ciceronian corpus may be used to answer the following question: "How and why will the study of the liberal arts, history, law, and philosophy educate a man for *humanitas*?" He begins by amassing a definition of *humanitas*. The man with *humanitas* will be helpful, considerate, tolerant, polite, moderate, mild, gentle, merciful, compassionate, benevolent, dutiful, upright, virtuous, tactful, and courteous. He will have *savoir faire* and the manners, taste, and refinement of the aristocrat. This cultured humanitarian gentleman will be committed to the improvement of the human condition (although the source quoted to support this last is inadequate). Then Wellman extracts the notion from *de Finibus*, where Cicero presents arguments against a Stoic negative view of nature, that *humanitas* is "closely allied" with human nature, and that the man with *humanitas* lives in accordance with nature. Since human nature is characterized by rationality and speech, and since these latter cannot arise outside of human society (*communitas*), and since virtue preserves *communitas*, virtue must be exercised in the natural drive for self-preservation. Thus, the man with *humanitas* lives in accordance with the dictates of human nature. But the liberal arts, history, philosophy, and law reveal to man more exactly just what human nature (and nature in general) is, and so they are necessary and conducive to *humanitas*. Finally, the learning of virtue entails more than the memorizing of a set of principles. As in Plato, one does not really know virtue unless one exercises

it. Thus, some education at least reduces to the imparting of socially constructive habits.

The train of thought is subtle with interesting twists and turns. As in all versions of the natural law argument, the concept of nature is ambiguous and probably muddled. It sounds odd to say that one must study human nature in order to live in accordance with it. How does one avoid living in accordance with nature? If the educational theory outlined by Wellman contains muddled terms, is Cicero to be convicted of muddled thinking? The answer is yes and no. In posing his original question: "How and why will the study of the liberal arts, history, law, and philosophy educate a man for *humanitas*?" Wellman goes on to note that "... a close scrutiny of commentaries on Cicero's educational theory fails to reveal an awareness of this question." Setting aside the question-begging term "educational theory," the remark is true, but a more fitting conclusion to such scrutiny is to argue that Cicero himself was not aware of this question. He never asked it. If Cicero had asked himself that specific question, he might have answered it in the manner described at length by Wellman, but we cannot be sure, and consequently important issues about methodology are raised. Anachronism is the major issue, but there are also questions concerning the legitimacy and utility of extracting such answers from the works of classical writers. As an extreme example, it may be possible "by synthesizing remarks gleaned from many of Cicero's works" to compose a set of political views applicable to the present situation in Vietnam, but the utility of such a procedure is questionable. This sort of thing has been done rather successfully by Crossman in his *Plato Today*, but that was Plato, not

Cicero. Again, Wolfson has formulated with great skill how Philo Judaeus would have answered a systematic set of questions had he chosen a systematic form of presentation, but that was Philo, not Cicero. While the legacy of Cicero's philosophical works has been of huge importance to the subsequent intellectual history of western Europe, it has long been generally agreed that Cicero himself was not a philosopher of great power, nor did he pretend that he was. These justly famed philosophical works present an invaluable transcription of general philosophical notions of the time relevant to the work at hand, but do not represent the degree of tough-minded coherence we should call a personal philosophical position. A full-scale attempt to describe such a coherent philosophical position for Cicero was made by H. A. K. Hunt in *The Humanism of Cicero* (Melbourne University Press, 1954) with dubious success, as perusal of the relevant reviews shows.

But even if philosophic consistency throughout the works were to be granted to Cicero, it still must be emphasized that there is a difference between conscious theorizing and the coherence that lies latent and unperceived below the total reaction of any man to himself and the world around him. Wellman performs a service in displaying the rich terminological role *humanitas* plays in Cicero's thought. At the level of conscious educational theory, however (and progress takes place only at this level), Cicero and his contemporaries were operating with the more prosaic terms described by Gwynn and others. Cicero was indeed convinced that the liberal arts led to *humanitas* but, so far as we can tell, he never asked himself just how the process worked. He might well have considered the problem trivial, for it takes

on significance only within the context of present day discussions of educational theory. At present, teachers of the liberal arts are continually subjecting themselves to agonizing reappraisals and attempting to find ways to evaluate and measure their effectiveness. They continually ask themselves what to teach and how to teach it in order to arrive at a final product about whose exact makeup they achieve little agreement. *Humanitas* was the basis of agreement for Cicero and his contemporaries, thus constituting, it may be argued, the vague label which glossed over just such problems. For Cicero, the question raised by Wellman was not yet a live issue, and it is no service to Cicero to construct an answer for him. One must remember a final unsettling conclusion: Cicero was a great and eloquent man. Had he thought of the question, he might have answered it better.

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CICERO: EDUCATION FOR *Humanitas*

To the Editors:

Mr. Wellman well sets forth the continuing significance of Cicero's humanistic concept of education and carries his analysis more deeply than has usually been the case. Cicero and Quintilian established for the later Roman Empire and the Middle Ages the concept of the "liberal arts," those suited to a free man, i.e., a citizen and a gentleman. For both theorists, humane letters culminated in rhetoric; thus their influence remained strong from the seventeenth to the nineteenth century, particularly in England, where the culmination of a gentleman's career was, as it had been in Rome, public life: parliament and the need

for public speaking. The concept of an education at once broadly based and carefully defined as to content is a far cry from President Eliot's democracy of all subjects or Dewey's pragmatic approach with emphasis on "education" rather than content. It is therefore fitting that Cicero's view should be re-examined in an educational rather than in a purely classical journal.

Mr. Wellman might cause some lifted eyebrows among professional classicists for having failed to call attention to appropriate bibliography; for example, he criticizes the late E. K. Rand, a great admirer of Cicero's humanism, for not carrying his analysis of the precise educational function of Ciceronian humanism deeply enough (n. 4). In Rand's *Building of Eternal Rome* (Harvard Univ. Press, 1943) pp. 29-30, he calls Cicero's program "a program of an abundant life" and on pp. 241-244 he shows how influential the Ciceronian views were on Christian humanism. Professor Rand was fond of quoting as the humanist's motto a well known verse from Terence's *Heautontimoroumenos* 77: "Homo sum, nil humani alienum puto." Cicero several times quoted or paraphrased this verse: in *de Off.* I 9 (30) he set it against man's tendency towards self-interest; in *de Leg.* I 12 (33) he used it in support of his advocacy of natural law; and in *de Fin.* III 19 (63) he paraphrased it to suggest the natural human tendency to form societies. S. G. Ashmore, in his commented edition of Terence (Oxford Univ. Press, 1908, ed. 2 1910) p. 86 n. *ad loc.*, notes that the verse simply expresses the Stoic tenet of the common brotherhood of men; but it may also be used to support a broadly humanistic theory of education.

For Cicero's humanism, S. E. Smet-hurst collected recent bibliography in an article "Cicero's Rhetorical and

Philosophical Works" in the *Classical World* 50.1 (Oct., 1957) pp. 40-41, section 5: *Humanitas*, especially n. 88. He added only one further reference in his sequel for the years 1957-1963 in *CW* 58.2 (Oct., 1964) p. 37, towards the bottom of col. 2, namely, U. Knocke in *Hermes* 87 (1959) pp. 57-74. Nor does W. Allen, Jr., add much in his earlier survey for the years 1939-1953 in *Classical Weekly* (the former name of *CW*) 47.9 (March, 1954) p. 137 at the top of col. 1. H. A. K. Hunt's *The Humanism of Cicero* (Melbourne Univ. Press, 1954) might have been mentioned by Mr. Wellman if only to point out that it is not relevant (despite its title), since Hunt writes about Cicero's philosophy, which he regards as humanistic: its sources, adaptations, and originality, rather than merely about educational theory; see the concluding ch. VII entitled specifically "The Humanism of Cicero" (pp. 188-205). What is still perhaps the best general English treatment of Cicero, T. Petersson, *Cicero: A Biography* (Univ. of California Press, 1920) very briefly describes Cicero's humanism on p. 579 as a combination of Greek culture and Roman patriotism which originated in the circle of the Scipios and the Greek philosopher Panaetius in the second century B.C., a circle discussed earlier on pp. 344-349. The best detailed discussion of Cicero in recent years is in German, the long article by three authors in Pauly-Wissowa, *et al.*, *Realencyclopädie usw.*, Reihe 2 under *Tullius* 29, in which R. Philippson wrote on "M. Tullius Cicero: Philosophische Schriften" and briefly alludes to Cicero as the chief formulator of a humanistic ideal in col. 1182 bottom to 1183 top. I have not seen the perhaps unpublished thesis by Sesto Prete entitled "Humanus" to which he refers in his critical edition of Terence (Heidel-

berg, Kerle, 1954) p. 121, n. on *Heaut.* as "nella Lett. arc. Milano 1948."

For the general history of ancient education, Mr. Wellman might have referred not only to Gwynn's *Roman Education* of 1926 (n. 1) but also to the more recent general study by H.-I. Marrou, *A History of Education in Antiquity* (New York, Sheed & Ward, 1956; trans. from the third French ed.; Fr. ed. 1 appeared in 1948). In the conclusion to part II on pp. 217-226, Marrou discusses "Classical Humanism" as the basis of Hellenistic education theory, taken over by the Romans. His brief comment on "The Work of Cicero" (p. 253) deals with Cicero's rhetoric, not with his humanism.

Mr. Wellman's abbreviations for some of Cicero's works, for example, while perfectly clear, would strike a classicist as eccentric; Wellman's *de Ora.* would usually be *de Or.*; *T. Dis.* would be *Tusc.*; *Pro Archia Poeta* would be *pro Arch.* or simply *Arch.*; *de Nat. Deor.* would be *de N.D.*, or *Nat. D.*

To comment on points of detail is difficult for one who has not read Cicero with as careful attention to *humanitas* as has Mr. Wellman. Somewhere certainly, and perhaps in n. 7, there should be mention of W. W. Jaeger's *Paideia* as the fundamental modern discussion of the Greek equivalent to Roman *humanitas*, especially as expounded by Plato and Isocrates. The references in n. 9 to studies of the dissolution of the Roman Republic might, of course, be vastly extended, but perhaps Mr. Wellman might have noted one of the most outstanding works, Sir Ronald Syme's *Roman Revolution* (Oxford, Clarendon Press, 1939), if not a more popular recent book by John Dickinson, *Death of a Republic* (New York & London, Macmillan,

1963; posthumously edited by George L. Haskins). It might be noted that F. R. Cowell's *Cicero* has, in the Penguin/Pelican A 320, gone into a second revised edition as of 1962.

In connection with the quotation from Snell (n. 10), the contrast between "humanism" and "humanitarianism" might be elaborated. "Humanitarianism," in Greek *philanthropia* (as noted earlier), embraces all aspects of man and all types of men, as implied in the quotation from Terence; "humanism," on the contrary, concentrates on the "best man" and on his most essentially human qualities, particularly that of reason. Cicero's description in a letter to his brother Quintus (n. 11) of the "rule of the humanist" suggests his concept of the *princeps*, the ideal political leader or leaders who guide the state by *auctoritas*—that which in them makes others look up to and respect them—rather than by office, power, or force. Cicero's ideal may well have influenced Augustus in formulating his "principate," though this is much disputed.

In the discussion supported by n. 13, perhaps a sharper distinction might be made between "nature," e.g., in such a phrase as "to live according to nature," and "human nature," e.g., as implied in "man . . . by his very nature," though of course the second is merely a special case of the first. "Nature," however, involves the general constitution of the whole universe—the *kosmos*—whereas "human nature" is restricted to mankind. More emphasis also might be laid on the "natural" quality of virtue, notably for Plato and for Cicero, and on the "unnatural" quality of vice. Many would today regard ethical standards as conventions of a given society rather than as inherent characteristics of "human nature" and thus ultimately of the universe.

In the paragraph following n. 17, it

may be questioned how far Cicero distinguished between philosophy and theology; for him the *de Nat. D.* or the *de Div.* were presumably as much philosophical treatises as were the *de Off.* or the *de Fin.*

At the end of the paragraph containing n. 23, education for *humanitas* is, according to Mr. Wellman's own thesis, concerned with developing not only abilities and skills but also the whole personality; this might be brought out more strongly.

The quotation from the *pro Arch.* (n. 25) underlines what Mr. Wellman implies but might have stated more fully: the importance in ancient education not only of ethical maxims (his "cognitive repertories") but particularly of *exempla* such as were collected, a century after Cicero, by Valerius Maximus to serve as material for speakers and teachers.

In the discussion of the translation of knowledge into action, e.g., in *de Rep.* I 2 (n. 26), it is indeed generally argued that ancient philosophy had no real concept of the intermediary of "will," though some scholars find this adumbrated in Aristotle's *proairesis*. But Mr. Wellman gives the impression that classical thinkers did not admit that knowledge of the good was possible without realization in good acts. He might have recalled that Ovid placed in the mouth of Medea (*Met.* VII 20/1) a famous expression of the conflict between reason and love: "Video meliora proboque/deteriora sequor."

The reference in the final paragraph to n. 30 does not really illuminate the point that philosophy, as an *ars*, involves "doing" rather than merely "comprehending" because of the necessary (as he argues) continuity between thought and action. The point might better be illustrated by Socrates' state-

ment in the *Phaedo* 61c that in a dream he had been instructed *mousiken poiei kai ergazon*; ("do [or: make] music and work") and that although he at first thought that his life-long pursuit of philosophy had been "doing" the highest activity of the Muses, he had in prison turned to versifying the fables of Aesop. Also in this paragraph the concluding sentence might, in accordance with the whole argument, be expanded as follows: "philosophy educated the man of [and men in] *humanitas*, [i.e.] the good man, [not only] by cultivating in him a moral *Weltanschauung* [but by broadening and maturing his whole personality and by inducing him to realize both his *Weltanschauung* and personality in moral, including social and political, action] within the context of its discourse."

MASON HAMMOND
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THE COMPUTER AND INFORMATION RETRIEVAL

To the Editors:

I am grateful for the opportunity to reply to the perceptive questions raised by Dr. Borko in *To The Editors* (HER, Summer, 1965). Before doing so, however, I must apologize to the readers of HER for the omission of the data from Table I which was discussed by Dr. Borko and has been noted by the editors. This error is entirely the fault of the authors.

Three specific questions were raised by Dr. Borko and are quoted below:

1. Was there a difference in the computer's ability to retrieve statutes as compared with Attorney General's opinions?
2. Was there a difference in the ef-

fectiveness of KWIC-type searches and of standard searches?

3. Was there a difference in the relevance of the retrieved material to the questions asked by the state and university personnel on the one hand and the school district personnel on the other hand?

In response to the first question, the answer is a qualified "no." Since the input procedures, concordance of the text, and search strategies are identical for both statutes and opinions, the technique is the same. However, the opinions are, in many cases, much more lengthy and contain references to other opinions as well as to statutes and judicial decisions. Thus, greater opportunity for retrieving non-relevant documents can occur because of the additional material and the less formal manner in which opinions are written.

However, a more crucial question is involved; namely, the inaccessibility of the Attorney General's Opinions to those who need them. Unlike statutes, the opinions are not indexed and compiled and made available for distribution. Complete sets of opinions are rare and may usually be found in the capitol. Thus, by gathering together in one source the opinions germane to education, a central repository was made available in a form which could be exploited to a degree not possible in the past.

The effectiveness of KWIC-type and standard searches can best be measured according to the intended use of each. Substantive questions cannot usually be resolved by KWIC searches alone since only one or two words (serially) are selected. Thus, single concept inquiries can best be handled by this search strategy. However, for purposes of amending legislation, KWIC-type searches offer the ultimate in thoroughness and accuracy for each and every

occurrence if a word or phrase can be pinpointed. Also, KWIC-type searches can provide the intermediary step for locating information; that is, by listing the occurrences of the words within the context of the sentence, the user is directed to the source without having the entire printout of the document. This may or may not be advantageous depending upon the user's purpose.

The third and last question raised by Dr. Borko relates to the relevance of the retrieved material. In essence, this is the most crucial and appropriate point which can be raised in a discussion of information storage and retrieval systems. While the authors did differentiate the users of the system as being state or university personnel and public school officials in terms of the adequacy of the answers given to each group, it is our belief that the difference lies in the questions as well as with the "questioners." That is, those engaged in public school administration often raise questions which are not covered by the statutes. Furthermore, the consequences of a school district's decision may be of such a nature that the attorney and/or the chief school officer may not be convinced that the language of the law satisfies the problem at hand and will, therefore, seek judicial guidelines. In contrast, state officials, if in doubt, will often turn to the attorney general's office for advice (in Pennsylvania this may be in the form of a "formal" or "informal" opinion). Usually, however, the legal staff is much more knowledgeable in the specialty of school law than is the typical school attorney and furthermore is not faced with the numerous legal ques-

tions which arise at the local level. Finally, professors of education usually operate in a more theoretical consideration of school law and are not faced with the immediacy of problems requiring legal research. Thus, they are more easily "satisfied."

In any event, the question of relevance is determined by the specific need for information and the purpose for which it is intended. Therefore, the depth of the answer required is dependent upon several factors including the level of expertise of the questioner, the significance of the decision as well as its consequences, etc. In short, relevance cannot be quantitatively measured—at least, not yet.

In closing, allow me to emphasize and extend the comments made by Dr. Borko relating to the need for carefully and cautiously interpreting the results of experiments on automated information storage and retrieval. Specifically, the "red flag" must be raised against those who would generalize from the results derived from any one investigation. Far too many variables are involved and few, if any, have been thoroughly investigated. Thus, much more experimentation is needed in order to understand the interaction between the user of a system, the documents comprising the file in the system, and the intermediaries involved in operating the system, as well as the equipment for processing, searching, and retrieving the information. Finally, I should like to thank Dr. Borko for his thoughtful and provocative comments which, as always, are welcome and desirable.

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Book Reviews

CHILDREN AND POLITICS.

by Fred I. Greenstein.

New Haven: Yale University Press, 1965. 199 pp. \$5.00.

Mr. Greenstein has contributed one of the few empirical studies on political socialization in the United States, along with findings that lend some support to earlier work of Herbert Hyman¹ and the current studies of Robert Hess and David Easton.² *Children and Politics* includes a comprehensive review of literature on political socialization, with reference to relevant works in many of the social sciences. In spite of conceptual and methodological deficiencies, the book is welcome on at least two counts. First, the author's interpretive remarks reflect a healthy concern for and competence in an inter-

disciplinary approach to social science research, an approach that educational researchers would do well to emulate. Greenstein justifies his investigation and interprets its results through a fund of concepts from political science, child development, and sociology. He speculates on the psychological reasons for boys' greater interest in and knowledge of politics, compared to girls. He suggests sociological explanations for differences in political attitudes between groups of lower vs. upper socio-economic status. He relates the inquiry to issues in citizenship education and political theory.

Second, the study is particularly instructive to those concerned with problems of research methodology, for the reader confronts at many points issues in questionnaire design and data interpretation. Mr. Greenstein has also demonstrated use of the apparently long-lost, though often hypocritically recommended, technique of replication. He searched the literature for previous studies of children's choices of exemplars ("Name a person whom you want to be like"). Beginning as far back as 1902 and ending with his own exemplar

¹ *Political Socialization: A Study in the Psychology of Political Behavior*. (Glencoe, Ill.: Free Press, 1958).

² For example, "The Child's Image of the President," *Public Opinion Quarterly*, 1960, 24, pp. 632-44. The authors have written a number of reports on their recent four-year research project sponsored by the U.S. Office of Education.

data in 1958, he sketches an historical picture of changing aspirations of youth toward public office. His findings in this area make only a slight substantive contribution, but such historical replication deserves the attention of more researchers.

The investigation deals with "selected aspects of early political learning" (p. 16), focusing on 659 New Haven children in the fourth through the eighth grades. A paper-pencil questionnaire requested the subjects to: 1) rank given political roles in terms of their "importance"; 2) name several political officials; 3) describe the work of given roles and institutions; 4) evaluate the performance of given officials; 5) indicate a preference of political party; 6) name a famous person from each party; 7) describe how the parties differ; 8) name a famous person whom they "want to be like" (also "don't want to be like"); 9) indicate the type of job to which they aspire; 10) report the party preference of their parents; 11) indicate a person from whom they would request advice on voting; 12) describe what change they would make in the world if they could make any change they wished. Responses to the items were analyzed in terms of longitudinal (actually cross-sectional) differences from the fourth to the eighth grade, and in terms of differences based on sex and socio-economic status (hereafter SES). With regard to subjects' exemplars, the findings were compared with those of previous investigators dating back to the turn of the century.

Some of the conclusions (stated most broadly): 1) children rate political officials as highly important, compared with other roles such as teacher, doctor, religious leader; 2) federal officials are named with greater accuracy than local or state officials; 3) subjects have very

little knowledge of the nature of the officials' work; 4) subjects usually evaluate the officials' performance as highly positive; 5) subjects give the same party preference that they report their parents as having; 6) subjects are unable to describe differences between the parties; 7) they are unable to name famous persons in both parties; 8) they do not aspire to political office, though a greater proportion of children did earlier in the century. Most of these findings are qualified by reference to longitudinal change and differences between sexes and social classes. For example, the amount of information about political roles increases with age, and the positive evaluation of officials decreases. Subjects of lower SES have less political knowledge and lower political aspiration than upper SES children. Boys have more information and interest in political office than girls.

The conclusions have been deliberately summarized here as discrete items in a list, because the methodology of the study will not permit this reviewer to stretch the separate items into a more grandiose interpretation of American youth. Mr. Greenstein carefully warns us that only "selected" aspects of political learning have been probed. Yet even these selected aspects and the above conclusions invite a number of criticisms. The criticisms relate to a) the conceptualization of political socialization; b) questionnaire design; and c) interpretation of data.

If one were to induce from the items on Mr. Greenstein's questionnaire an operational definition of political socialization, one would consider a child politically socialized so far as he a) aspired to public office, b) accurately named public office holders and party leaders, c) accurately described the work of public officials and the differences between parties. This is not to

suggest that Mr. Greenstein is incapable of a more sophisticated definition, but merely to point out that this study reflects an extremely narrow construction of the concept. If we construe political socialization as the acquisition of a complex constellation of attitudes and beliefs about the governing process—for example, the American Creed as described by Myrdal³—then Mr. Greenstein's study contributes virtually nothing to our knowledge of children's view of the political world. What value commitments do children have regarding the ways by which various office holders should be chosen? What are their attitudes toward various techniques of persuasion or manipulation in political affairs? What limits would they place upon the range of concerns over which public officials should be allowed to exercise power? Do they have assumptions about the nature of man which may influence their conception of the function of government? Social scientists have hypothesized that political cohesion in the United States is a function of widespread consensus focusing on principles of constitutionalism, liberalism, the Judeo-Christian tradition, etc. Perhaps future investigators will ask systematically whether children do acquire the values and beliefs on which political stability in the United States seems to depend, because neither Mr. Greenstein nor other investigators have studied what this reviewer considers the most fundamental aspects of political socialization.

A number of survey studies use methodological formats similar to Mr. Greenstein's. They often contain items that elicit uninterpretable responses. Two factors contributing to interpretive

difficulties might be labeled *unanswerable questions* and *inconsistent response style*. For examples of the former, consider the following two questions:

19. (I) Check the names of the
four most important
people (p. 175)
Mayor of a city
Schoolteacher
Judge
School principal
President of the country
Doctor
Police chief
Religious leader
18. If you could vote, who would be
best to ask for voting advice?
(check one) (pp. 178-9)
a friend your own age
brother or sister
father
mother
teacher
someone else _____
(Write in whether this person
is a neighbor, relative, or what.)

Such questions force subjects to make gross, undifferentiated judgments, allowing no opportunity for a more precise definition of the question. The subject who in the first case asks, "important for what?" and in the second, "voting advice on what?" is unable to respond to these questions with any intellectual integrity. How is the investigator to interpret, and even more important, how is the reflective subject to answer such items?

With regard to inconsistent response style, again note item 19 above, and compare it with: "2. What kinds of things do you think the Mayor does?" (p. 176) In the former case, the subject is given several alternatives from which to choose, but in the latter, he is given no clues or alternatives on which to

³ *An American Dilemma: The Negro Problem in Modern Democracy*. (New York: Harper and Brothers, 1944).

base his answer. Because so few subjects were able to answer the latter kind of question accurately, Mr. Greenstein concluded that children had only low-level awareness of the nature of public officials' work. Yet a multiple choice form could have been used; e.g. "Check the things that you think the Mayor does: hires policemen; visits the President; cleans the City Hall; meets with the aldermen; etc." Perhaps this form would elicit from subjects a larger fund of correct information than the open-ended form. Conversely, if item 19 were phrased, "Who are the four most important people you can think of?" perhaps fewer political leaders would appear at the top of the children's lists.

The above critique of the questionnaire might be answered by referring to the findings and suggesting that the validity of the methodology is established to some extent by the discovery of expected social class, sex and longitudinal differences. Being aware of and sympathetic with this approach to the quest for validity, the reviewer must warn the reader that some of the author's interpretations of group differences are highly tentative, lacking substantiation in light of data presented in the tables. The author concludes that subjects from lower SES groups show greater deference to political authority than subjects from higher SES groups. One index of such deference is subjects' evaluations of political leaders (president, governor and mayor). In Table 5-2 (p. 101) the author notes that in 13 of 15 evaluations (three leaders rated by each of five grades), lower SES subjects were more likely to give the highest ("very good") of the evaluative categories ("don't know, very good, fairly good, not very good, bad"). The table, however, compares results only with regard to the "very good" responses. It obscures group differences on all the

other categories, and this could reverse the interpretation completely. For example, in the eighth grade only 53% of the upper SES group rated the President "very good," but 68% of the lower SES group rated him that way. It is possible that the remaining 47% of the upper SES group rated him "fairly good," and that the remaining 32% of the lower SES group rated him "bad." If this were the case the mean rating of the upper SES group would be *higher* (instead of lower) than the ratings of the lower SES group. Usually Mr. Greenstein makes appropriately modest claims about "significant" differences, but since most of the data is reported in tables containing percentages grouped by sex, SES, and grade level, the reader must examine inferred differences with the greatest of care. In general, this reviewer is not convinced that findings reported in the tables contribute much to the validity of the questionnaire.

The findings tell us very little about children and politics, but *Children and Politics* serves as a provocative case study. Its particular focus dramatizes the need for more sophisticated identification of the significant components of political socialization. In spite of its methodological and interpretative problems, it helpfully illustrates a "generalist" approach to the study of youth within the context of the body politic.

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SOCIETY AND THE ADOLESCENT SELF-IMAGE.

by Morris Rosenberg.

Princeton, New Jersey: Princeton University Press, 1965. 326 pp. \$6.50.

This book is primarily a report of research, the main aim of which is (1)

to specify the *bearing* of social factors on self-esteem and (2) to indicate the *influence* of self-esteem on socially significant attitudes and behavior. The scope of the study is quite broad and comprehensive. The presentation begins with a consideration of the relationship of self-esteem in the broader social environment (specifically socio-economic status, religion, and ethnic group characteristics), and in the family (structure, birth order, and parental interest). The psychological and interpersonal correlates and their social consequences (participation and leadership in the high school community, concern with public affairs, and occupational orientation) are then examined. The final phase deals with society and self-values.

Despite stated aims of researching "bearing" and "influence," the design only permits findings about how membership in different "social" groupings is related to self-esteem scores. Psychological dynamics are inferred, that is, the respondent reports his "state" and the experimenter fills in the dynamics by positing relationships among the various states. Neither causation nor effect, nor treatment nor change, is part of this study. In part, it is historical—reflections on the past related to present conditions; in part, it is concerned with relationships among factors in the present.

Before this report is used as new knowledge about adolescents and their self-image, a critical inquiry into the research context from which the findings emerge is essential.

From whom were the data obtained, i.e., what is the nature of the sample? A questionnaire was administered by teachers to 5,024 high school juniors and seniors from ten randomly selected high schools in New York State. Though the schools were stratified according to

size, the schools were not representative of socio-economic status, religion, nationality, or anything else. Further, there was no follow-up of absentees; only those present on the one day of administration were queried. As the author tells us, the sample is not even representative of New York State high school juniors and seniors. What we do have, then, is some data on some junior and senior high school students in one state, a sub-population whose relationship to any other population is not known. For a study which was prompted by concern with the little known "about the nature and distribution of self esteem . . . in the broader society" (p. 3), this is a crippling limitation.

A second major consideration is the definition of the basic construct—the "operational definition" given to the fundamental concept on which this study is based. Let us examine the logic of the inquiry and the nature of the data.

Justification for the study is lodged within the social-psychological study of attitudes, and self-attitudes are contrasted with public opinion attitudes. The differences of self-attitudes from attitudes toward other objects are presumed to be *only* quantitative. Attitude is construed broadly to include "facts, opinions, and values with regard to the self" (p. 5). The main concern, however, is with *self-esteem*, defined as *the* direction of *the* self-attitudes, that is, whether it is favorable or unfavorable, worthy or unworthy, positive or negative, or adequate or inadequate. Self-esteem is further delineated as *the* feeling that one is "good enough," not whether one considers himself superior to others.

The measure of self-esteem is a ten-item Guttman scale which through contrived items is collapsed into a seven-point scale. The scale is then used

to separate those who report "high, medium, and low" self-esteem. These three groups, for the most part, are then related to membership in different "social" groupings. The assumption is that different experiences result from these groupings and influence the level of self-esteem.

The important questions here are two: How adequate is the conceptual structure of the inquiry? How adequate is the basic measure?

Let me begin by saying that the study suffers from shortcomings which are not unique to it; unfortunately, it shares the shortcomings of most studies in this area. (Indeed, a basic problem is with the definition of this area of research.) The underlying process of giving meaning to experience, in this instance that portion or aspect specifically designated by an individual as self-experience, is never clearly confronted in this study. There is no clear definition of terms nor of their interrelationships. Most often, the following notions are used quite interchangeably: self-image, self-feelings, self-attitudes, self-evaluation, ego-involvement, self-concept, self-respect; even "sentiment of self-regard" creeps in. Moreover, the place of the basic construct(s) in the total psychological structure of a person is (are) not articulated. It may well be that some sort of taxonomy of the language of self is needed, but in the least, individual researchers should make clear their own definitional structures.

The specific concern is with a person's self-esteem in general, that is, over, above, and regardless of a situational context. Though conditional factors are acknowledged and intriguingly considered, the focus is on their association with a general level of self-esteem. Self-image in particular contexts was not investigated. Yet the adequacy of global measures is well estab-

lished, and we do know that people do feel differently about themselves in different contexts, i.e., that self-esteem is conditional. Perhaps, however, that task, that inquiry, belongs to another branch of psychology.

Despite some statistical acceptability, the measure of self-esteem seems conceptually impoverished. The complexity of the dimension of personal meaning systems as regards one's self does not lend itself to such limited sampling. I am as concerned about a ten-item, 2- or 3-minute measure of self-esteem (despite the plea for economy of time and administration) in which a respondent merely checks the extent of agreement with a statement as I would be about a ten-item measure of intelligence. The point is two-fold: Statistical adequacy should not be confused with conceptual rigor. Nor can parsimony be used to justify reductionism.

So much for the assumptive structure. Now to the data analyses where unfortunately, the limitations proved to be as fundamental. Indeed, the major objection seriously compromises the worth of the findings. The sole statistical distinction offered regarding the findings is whether or not they went beyond the .05 probability level. The precise probability levels associated with the various statistical tests of significance are not reported, a grievous omission. As a result, no clear distinctions of the warrantability of the findings are possible, and—*most damaging to the study*—few distinctions are made even between statistically significant and non-significant data in the discussions. The reader must sift painstakingly among the results and, despite their face appeal, resist running with unsupported but engagingly advanced conclusions. (It should be apparent that the author did not resist.) Specific references will serve to illustrate and underscore the

objection. In dealing with the religious context (Chapter 4) none of the data are statistically significant; with the family (Chapter 5), only 1 of 13 tables of data is statistically significant. Yet in each instance, trends are extrapolated, and much, much is suggested and advanced as new knowledge. The phenomenon of "capitalizing on chance" is either blatantly ignored or unknown. In effect, there is little substance to most of the assertions. Valid empirical evidence just is not there to support the conclusions.

I suspect that, at this point, enough has been said to convey my judgment of the worth of this study. What follows are important but somewhat less crucial considerations that are nevertheless noteworthy.

A stated purpose of selecting a large sample was to permit the use of multivariate analysis. Yet it seems unfortunate that more powerful multivariate statistical procedures were not employed. The analyses involved two variables only; where additional variables were considered through statistical controls, no tests of significance were computed. Many of the variables are single items, and the corresponding analyses are of item-item relationships.

Some considerations of self-esteem are unsettling. The designation of the high, medium, and low self-esteem groups—central to the study—is never specified. Then, when dealing with the psychological correlates, the analysis shifts from these three basic groups to treatment of all seven scale levels separately. No reason for the shift is given. Further, an implicit assumption regarding self-esteem is "the higher, the better." But what is a "desirable" level of self-esteem? How much dissatisfaction with self is healthy? Certainly "none" is not the answer.

Finally, in discussing participation and leadership in high schools, the author displays a certain naïvete about the current psychology of membership which exists among students. Such statements as "Since high school clubs are, by and large, open to all and inclined to welcome new members . . ." (p. 192), "A major motivation for joining (informal) groups is simply the pleasure of human association . . ." (p. 199), and "Participation in (extracurricular) activities is a voluntary matter; an important motivation is simply the satisfaction of doing things with others . . ." (p. 202) do not reflect awareness of student planning to use membership and participation to influence college admissions officers, and/or teachers.

There is a significant strength to the book. Though disappointed by the realization that the assertions had little foundation in the present research, I was continually intrigued by suggested possibilities of relationship among the data. The author is at his best when he shares with us his thinking during the data analyses. A most telling thrust is his premise that the individual must always be considered in relation to his situation (to his *group* memberships), not to a general situation. For example, to the question "Does the broken home have an effect upon the emotional state of the child?", his answer is "It depends"—on religion, on the mother's age at the time of the marital rupture, and on whether or not the mother remarried. His analyses are extremely provocative. He engages in what I can best describe as *differential sociology*.

Let me summarize. Admittedly this is an extremely difficult area to research. And the author has identified and approached some meaningful dimensions to a major research problem. But rather than simply drawing implications for education, the report was eval-

uated as a piece of research and found wanting.

As substantive research, as a contribution to knowledge, this effort has serious, overwhelming weaknesses—the representativeness of the sample, the definition and measurement of the crucial construct, and the warrantableness of the conclusions. As a source of researchable hypotheses, as an example of creative thinking in data analysis, the effort has some merit. However, a definitive inquiry into the social dimensions of the processes of personal definition remains to be done.

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TRANSFORMATIONAL GRAMMAR AND THE
TEACHER OF ENGLISH.

by Owen Thomas.

New York: Holt, Rinehart and
Winston, Inc., 1965. 240 pp. \$3.95.*

The past decade or so has witnessed the beginning of what many structural linguists regard as a major revolution in their field, a revolution that may prove to be as dramatic in its implications for the scientific study of language as was the Darwinian revolution for biology or the Einsteinian for physics. This revolution, which centers around the theory of transformational generative grammar (hereafter, TG) being developed by Noam Chomsky and his colleagues and students at the Massachusetts Institute of Technology, is still very much in progress. But a substantial body of work has already

been produced, and there seems little doubt of the profound and lasting influence of this work upon the development of linguistic science.

Since the publication of Chomsky's *Syntactic Structures*,¹ work involving the theory of TG has proceeded along two sometimes-parallel, sometimes-intersecting, lines: the refinement and development of the theory itself, and the application of the theory to phenomena presented by various languages. In this second category may be mentioned what is by now a quite solid corpus of studies of the structure of English. These studies have, for the most part, taken the form of technical papers appearing in scholarly journals, and have thus not been easily accessible, either physically or in content, to English teachers. It is to remedy this situation that Professor Owen Thomas, using experience acquired through teaching TG to the audience of English teachers, has written the book under review.

The book is, then, a popularization of TG specifically designed for the teacher of English. But popularization does not in this case mean oversimplification. For Professor Thomas has consistently taken pains to provide both an accurate account of transformational theory and a viable grammar of English. In this respect, his book differs markedly from certain recent transformationally-oriented student grammars of English, such as Paul Roberts' *English Syntax*,² which, in the name of pedagogy, tend to dilute the theory of TG and trivialize its application to the analysis of English structure. Professor Thomas, on the other hand, although he has written—to use his own distinc-

¹ Noam Chomsky, *Syntactic Structures* (The Hague: Mouton & Co., 1957).

² Paul Roberts, *English Syntax* (New York: Harcourt, Brace & World, 1964).

* Editor's Note: Published after this review went to press. Mr. Schachter read a preliminary edition.

tion—a “pedagogic” rather than a “scientific” grammar, has succeeded to a remarkable degree in offering the reader both an undistorted picture of the present state of transformational theory and an account of English grammar that clearly reveals the theory’s value. The version of transformational theory presented in the book is, indeed, an impressively up-to-date one, incorporating certain recent theoretical advances that are just now coming to the attention of the scholarly community—e.g., the developments reported in Chomsky’s *Aspects of the Theory of Syntax*.³ And the account given of English grammar reflects a critical scrutiny of much of the literature on this subject that has appeared in recent years.

The book divides itself naturally into three parts: an opening chapter concerned with placing TG in an appropriate ideational and historical context; a central section (chapters 2 through 7) devoted to a presentation of English grammar from a transformational point of view; and a concluding chapter that seeks to spell out the implications of TG for the teaching of English in the schools. The work of the opening chapter is accomplished through the explanation of certain crucial distinctions, two of which—the distinction between *competence* and *performance* and that between *generative* and *transformational*—it may be useful to summarize here.

The competence of a speaker of a language is what he knows about his language that enables him to use it; his performance is what he actually does. TG resembles traditional grammar (and differs from “structural grammar,” the dominant pre-TG ap-

proach) in giving primary attention to the study of speaker competence. It departs from traditional grammar in the explicitness of the account it provides of speaker competence. That is, where the statements of traditional grammar depend for their interpretation upon the intelligence of the reader—depend, in other words, upon that very competence they seek to explain—the statements of TG take the form of a set of automatically-operating, hence explicit, rules.

Since the most striking manifestation of the speaker’s competence is his ability to produce (and understand) indefinitely many novel utterances, it is clear that any set of rules matching the speaker’s competence must also have this property—must, in other words, be generative. In the particular generative model proposed by the M.I.T. group, there is one set of rules that generate basic sentence structures and another set that operate upon and alter these structures so as to produce the full structural range of the language. Rules of the first type are *base rules*; rules of the second type are *transformational rules*.

Views of the capacities and interrelation of base rules and transformational rules have changed in recent years. Originally, the base rules were thought of as producing a certain limited set of structures, the structures underlying so-called kernel sentences, and the transformational rules as modifying and combining these structures to produce all other structures. In more recent work, the base rules have been assigned the task of producing deep structures (which underlie *all* sentences), while the transformational rules have been assigned that of converting deep structures into surface structures (the structures directly reflected in actual sentence forms).

³ Noam Chomsky, *Aspects of the Theory of Syntax* (Cambridge, Mass.: M.I.T. Press, 1965).

Since Professor Thomas has wished both to give a current account of TG and to report on work that predates the notional shift (work such as R. B. Lees's *The Grammar of English Nominalizations*),⁴ he has been faced with the problem of a wholesale conversion of rules from a form reflecting the old model of TG to a form reflecting the new. This problem he has solved with great success, and there is no doubt that the version of English grammar presented in the central section of Professor Thomas' book is not only a viable TG but also by far the fullest presently available one reflecting recent theoretical developments.

As anyone who has tried to present scientific materials to a lay audience knows, part of any such presentation must inevitably constitute an introduction to the science itself. Professor Thomas' TG of English is no exception, and includes a concise introductory course in descriptive linguistics—or, at least, in that part of descriptive linguistics concerned with morphology and syntax. This introduction, which is concerned with such matters as the concept of the morpheme and the distinction between form words and function words, is placed in chapter III of the book, rather than, as one might have expected, at the beginning of the presentation of the grammar in chapter II. It thus seems to function as a kind of digression, interrupting the otherwise orderly presentation of the grammatical structure of English.

This defect apart, the presentation of English structure is an orderly and easy-to-follow one, and the reader who works his way through Professor

Thomas' generally clear explanations and accurate formulations can expect to acquire both a great deal of insight into the workings of English and a sure grasp of the techniques of TG, a grasp that will stand him in good stead should he wish to enlarge his acquaintance with TG through the reading of other writings in the field. Particularly helpful in this connection are several pedagogic devices of which Professor Thomas makes effective use, among them: a graded set of "model grammars," gaining in complexity as the reader gains in sophistication; an abundance of "trees of derivation," graphic representations of sentence structures, which serve as the TG equivalents of traditional sentence diagrams; and "Looking Backward" and "Discussion" sections at the end of each chapter, offering, respectively, a helpful review of the chapter's contents, and suggestions for strengthening and deepening one's understanding of these contents.

The final, "frankly polemical" chapter of the book suggests some ways in which the teaching of English in the schools might be modified in the light of insights offered by TG. While the chapter makes a number of good points, there is much in it to which exception can quite reasonably be taken. Professor Thomas suggests, for example, that the language presented in primers and readers be based on the language of the child, and that "artificialities" such as the use of uncontracted forms be avoided. But surely there *are* differences between the spoken and the written language, as well as differences among various written styles, and it is one of the functions of the English class to make the child aware of these differences.

Professor Thomas' presentation of the implications of TG for the teach-

⁴ Robert B. Lees, *The Grammar of English Nominalizations* (Bloomington, Indiana: Indiana University Research Center in Anthropology, Folklore, and Linguistics, 1960).

ing of literature is also less than convincing. Consider, for example, his analysis of the first verse of the King James version of Genesis:

In its final form, then, the first verse consists of an adverbial of time followed by two direct objects in parallel: "In the beginning God created the heaven and the earth." The subject and verb of the constituent and matrix sentences are identical: "God created. . ." Consequently, they reinforce each other in the final derived sentence; that is, the first verse of Genesis doubly emphasizes both God and the act of creation. This is surely an effective use of deep structure.

One wonders whether Professor Thomas would attribute an equally effective use of deep structure to a sentence such as "In the morning Mary ate toast and marmalade," which has essentially the same structure as the sentence under analysis.

Such minor objections notwithstanding, the final chapter of the book should make stimulating reading for the audience for which it was intended. And there is no doubt that this audience of average, intelligent English teachers will find the book as a whole a readable and valuable one.

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CRISIS IN THE HUMANITIES.

edited by J. H. Plumb.

Baltimore: Penguin Books, 1964. 172 pp. \$1.25.

University education is not yet in Britain considered a universal human right, but increasing numbers of students are attending universities or aspiring to a university education, in a country which has had one of the low-

est ratios of university attendance of any advanced country. As in the United States, there is consequently a growing public interest in the content and methods of higher education, and this interest has been reflected in the popular press. The present book had its origin in a series of articles in the London *Sunday Times* in 1963. It shows a certain indecision, itself perhaps symptomatic, about what subjects constitute the "humanities": the original series consisted of four articles on Classics, Divinity, English and History; in his introduction, the editor adds to these four Fine Arts and Philosophy; and the book includes as well chapters on Sociology and Economics. Each chapter is written by a well-known representative of the discipline. For the most part it is an Oxbridge collection. With one exception, all of the authors were educated or hold posts at Oxford or Cambridge. Only one of the authors teaches at a Redbrick university, and only one at one of the "new universities." Nevertheless, all of the authors share a common and vigorous dissatisfaction with the present state of humanistic education. The collection as a whole has the tone of a tract by the Outs, although respectable and eminent Outs (at least one author is notoriously and unabashedly Out: Ernest Gellner in his longish and lively essay on philosophy returns to the attack on linguistic philosophy with which his book *Words and Things* fluttered the dovescotes in 1959); the Ins are seldom mentioned or catalogued by Order of Battle, although we are left to infer that they are many, satisfied and well-entrenched.

What is the crisis in the humanities? According to J. H. Plumb, the historian and editor of this collection, it is that they have lost their erstwhile social function as the proper education of the governing class and now must adapt

themselves to the needs of a society dominated by science and technology. But although references throughout the collection to C. P. Snow's *The Two Cultures* are predictably frequent, they reveal on the whole a gesture toward the topical rather than a diagnosis of the fundamental. One could in fact substitute, in almost every instance, "commerce and finance" for "science and technology," thus moving the calendar back half a century or more, without significantly changing the humanists' lament that the hungry sheep look up and are not fed, or else that the sheep aren't even looking up these days. One exception to this is Gellner's essay, and another might be Plumb's, which argues that the study of history shatters into a heap of monographic shards unless it is unified by the idea of progress—material progress—an idea which is to say the least hardly a novel perspective on history, although it has both generality and unpopularity to recommend it. But on the whole, the authors give very little thought to the "needs of a society dominated by science and technology." There is no mention at all of the ways in which technology promises—or threatens—to revolutionize the techniques of scholarship itself, although techniques of data retrieval and transmission, for example, may soon render obsolete the research library as we have known it and thus abolish the happiest and least efficient prerequisites of scholarship—the travel to distant collections, the tranquil days spent among archives, the satisfying accumulation of notes, jottings and extracts.

But the crisis in the humanities, almost all of the authors agree, is a crisis not of scholarship but of *teaching*, that is, of humanistic education. And what has brought about this crisis is not at all the "dominance of science

and technology" but rather the ascendancy of specialization and departmentalism in the curriculum of humane studies. The authors write not as adventurers exploring the vistas and horizons of new learning but as teachers and administrators uncomfortably aware that the courses of study prescribed for their own students seem increasingly to be arbitrary fractions of a phenomenally expanding body of knowledge; and whatever fraction may be established is hard put to justify its pre-eminence over other fractions which one may select and shuffle with some good reasons for every configuration. Why should students of literature be restricted, say, to English? Why should students of history concentrate on monarchy and Parliament in the reign of George III and know very little of modern European history? One good reason, as everyone knows, is that knowledge of detail, removed by very little inference from the sources themselves, is relatively hard knowledge, and it is by such information that in any case grander generalizations and hypotheses must be tested. But as detailed knowledge grows, explanations become more cautious and complex, so that scholarship today has roughly as many hypotheses as once it had *facts*. And somewhere along this line of sheer growth, the personal and social relevance of humanistic education becomes lost.

Flowing quietly through the book is a sense of the difference between what is "teachable" and what is not. Natural science is regarded by all of the authors as teachable (although most teachers of science I know would disagree); languages are teachable, and so in general are facts and techniques. The study of English literature becomes a "discipline" by including Anglo-Saxon and has more recently become specialized into "practical criticism," a teachable technique

of literary analysis. On the other hand, there are matters of feeling, imagination, sensibility and judgment, and of what Graham Hough in his essay on literary education calls the "formation of a personality ideal." These are the *point* of humanistic education. But they are unteachable—which is to say, *unexaminable*.

It is at this point that one is reminded of the old joke that Britain and the United States are separated mainly by the possession of a common language. Most of the problems, uncertainties, and aspirations of the authors of this collection will seem familiar and even rather old hat to the American reader (with some odd exceptions: it is a bit stunning to learn that there are in Britain fewer than a hundred professional sociologists). One expects that if these authors constituted themselves a committee and deliberated suitably they would emerge with a plan for a "core curriculum." Specific recommendations are in fact notably absent, and it would be easy enough to conclude that the collection envisions a very genteel revolution indeed. But the establishment of specialization is not a national phenomenon, although in the United States the ideal of higher education for all has more quickly brought it about that the armies of students have to be taught by regiments of teachers, each of whom is trained as a scholar and expected to make some contribution to learning. So scholarship has been exploding along with everything else. Our time is reaching the stage of development when the prime desideratum is an Encyclopedia, an integral compendium of useful and important learning, and this, if it existed, would be the foundation of a curriculum of general humane studies. But we have at the same time already reached the stage of recognizing the impossibility

of a new encyclopedia (one might even define higher education today as education which teaches students to abandon the devotion to encyclopedias inculcated in them in the schools). This is necessarily so because the most profound significance of an encyclopedia is that in its principles of selection and organization it reflects a widely shared conceptual scheme, including a hierarchy of values, of its own age; but such organizing schemes are for us themselves problems for investigation rather than unwritten constitutions of the community of learning.

The untidy pluralism of higher education in the United States no doubt increases the visibility of the problem. As in other European countries the existence in Britain of a quasi-national system of education (eleven-plus and fourteen-plus examinations in the schools, Ordinary and Advanced level examinations, the requirements for the Honours degree in the universities) disposes even critics of education like the authors of this book to suppose that changes must be accepted and made effective by reform of the *system*, that is, by modifying but retaining syllabi and examination schedules. The prospect of reform no doubt serves to keep educators at best hopeful and at worst sullen but not mutinous. But the revolution which the authors of this book would make is a tinker's revolution.

The alternative, I suppose, is to recognize that students learn more than they are taught and that they may organize their fractions in a way different from but no less defensible than the official syllabus. "Independent study" is, in part, an acknowledgment of such a possibility; it is significant that independent study is nowhere mentioned in the present book. Every student must drive his own tunnel through the mountain which no en-

cyclopedia maps, and the job of the teacher in higher education may turn out to be not that of a cartographer but that of critic of his students' tunnels. If this would be a revolution in education, it is not the revolution for which *Crisis in the Humanities* is a manifesto. The authors of that book, for the most part, simply want large-scale maps, like the ones we had when Greece was golden, the Dark Ages very dark and the Enlightenment radiant throughout.

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AMERICAN LITERATURE.

edited by Andrew J. Porter, Henry L. Terrie, Jr., and Edward J. Gordon.
Boston: Ginn & Company, 1964. 815 pp.
\$5.40.

Until recently many high school literature anthologies were a disgraceful hodge-podge of *Reader's Digest* and Sunday supplement ephemera, interspersed with an occasional sop of Sandburg or Robert Burns. Lately some text publishers have responded to the appalling facts set forth in the seventy-four pages of statistics in Lynch and Evans' *High School English Textbooks*,¹ have cut down on instructions for building solid-fuel missiles or accounts of courageous, blind toymakers in the Black Forest, have tried to limit the number of questions and projects—class writing of a Hamlet cantata, or whatever—and have used the space to better advantage with literary or quasi-literary selections.

Ginn's *American Literature* is in the new vein. Much that is in the book

is literary. In addition, it is well—nay, luxuriously—printed, and the illustrations are elegant. At times, one can find graceful editorial introductions. And on occasion, as in the case of Frost's "Design," there are questions skillfully put so as to lead a student to the crux of a poem. And yet this text is not the answer.

My objections are three-fold. First, in the preface, in the teachers' handbook, and by the very lay-out and division of the book, the editors make claims for the representativeness of their selections. One man will, of course, always take issue with another's choices, but I think precisely because of the editors' insistence on representativeness—their claim to be sketching for us the concept "America"—we may examine the execution of the plan. Second, from one of the virtues of the book—its prettiness—arises another of its drawbacks. The anthology does indeed contain much literature—but the editors, or the publishers, have not left it at that. The book claims also to be a social-studies text; a lexicon; and, as the handbook says, "a self-contained art program." The book strives mightily to be all things for all teachers, and for all classes. And third, the introductions to authors and the other pedagogic apparatus are, at best, uneven. This is a fault that must surely arise from the irresolution of aims.

To begin with the first complaint: many men—from de Tocqueville, through Parrington, to Leslie Fiedler—have attempted to isolate and define what is peculiarly American in character, in spirit, in literature. The Ginn editors, too, have devoted their first hundred pages to such an attempt, organizing the section under the heads "The Sense of Place," "The Individual," and "The American Dream." Such an outline should give scope

¹James J. Lynch and Bertrand Evans, *High School English Textbooks: a critical examination* (Boston: Little, Brown & Co., 1963).

enough for a defensible portrait, but the one presented seems to me incomplete and distorted.

In the "Sense of Place" section, the editors take us from the Colony in Virginia, through New England, a bit of Thomas Wolfe country, and then on to Kazin's New York. But to represent the Far West by Mark Twain's description of Lake Tahoe, and to dismiss the modern South with a marginal cross reference to Faulkner's *The Bear*, is to do less than justice. To ignore completely the almost epical panorama of the hard-bitten Midwest, as typified by the writing of Hamlin Garland, Sherwood Anderson, and Theodore Dreiser, is to ignore something very typically American.

The editors' conception of the American "Individual" is aptly prefigured by the frontispiece to the section: Gilbert Stuart's "The Skater," rightly described as "the embodiment of manliness and grace." But though the section does truly begin with those straight-arrows, de Tocqueville and Roger Williams, one can be grateful that the book cautiously belies its own babbity by including both Emily Dickinson's and Nathaniel Hawthorne's probings of the haunted mind. The section concludes lamely with Kenneth Fearing's somewhat postured "Portrait," a paean to pseudo-non-conformity. But the section is called "The Individual." Yet there is neither Thoreau's "Essay on Civil Disobedience," nor more than a cross-reference to Emerson. "And where, oh where," I should hope my students would ask, "are the *real* image breakers we hear about today? Where is Henry Miller? Where is the real Baldwin—the acrid, sour, scary, exaggerating one—not the tame one pussy-footing about the plight of the artist? Where's howling Ginsberg? And where is our epic individ-

ualist poet, Robinson Jeffers? Let's cut this *Our Town* stuff. We've heard that before."

The concluding section of the editors' mold into which the student is to place his later readings is titled "The American Dream." The dream features William Bradford, Jefferson, Whittier, Whitman, Katharine Lee Bates, Faulkner, and John F. Kennedy. Katharine Lee Bates—if your memory needs a jog—is the author of "America the Beautiful," the four alabaster stanzas of which are included for the literary edification of the pupil. The fact that "The American Dream" has not always been dreamed unanimously, that some of the dreamers have tossed in their sleep, and that one author had the gall to consider the dream an Air-Conditioned Nightmare, seems not to have been deemed worthy of note.

The second charge—that the book strives to do too many things at once—can be turned around to say that the book does not do justice by literature. Though it touches frequently on other domains, and though it overlaps sometimes into the concerns of philosophy, history, or the other arts, yet literature is, itself, none of these. Nor is it merely the poetical frosting on the solid cake of fact and statement. Certainly it reflects sociological patterns only in the most devious and unreliable way. Perhaps Walter Pater spoke most truly of literature when he suggested that all the arts aspire to the condition of music. In any case, literature represents a mode of experience and a way of knowing that is quite unlike any other, and one that implies and entails its own curious conventions, forms, and devices. These conventions, forms, and devices, are difficult and intricate. They must be taught. He who lacks the capacity to recognize and discriminate among them, perceives less, lives

poorer, lives less for the lack. All the more reason, then, why instruction in the medium should be workmanlike, single-minded, disciplined, and intense, without condescending lip-service, pretty pictures, vague, incidental social commentary, and patriotic patter.

My third charge—that the pedagogic apparatus is uneven—may be occasioned in part by the fragmentation and diffuseness of the editors' intentions. The pedagogic weaknesses fall into two categories.

The first and most serious pertains to the editors' conception of what a teacher does with his students, (even though, in this case, a teacher is in buckram). It is hardly news that good teachers have, for millenia, explicitly or implicitly, attempted to make students find answers (or have the illusion that they were finding answers). From Socrates, to the case method in the business and law schools, to Jerome Bruner, to the recent statement in the report of the Commission on English ("Question asking is the process the students must learn, becoming critics themselves as they become increasingly adept at asking their own questions and at seeking and testing their answers."),² under whatever fashionable rubric, the operative concept has been "discovery." It is surprising, therefore, to see again and again in the Ginn text the extent to which the student is told what to think—the extent to which the rationale of the book is deductive, and the extent to which the deductions flow from vague or debatable abstractions.

The main manifestation of this editorial determinism is, of course, in the introductory delineation of the con-

cept of America, with all the distortion and omission in that concept as presented. But in the case of individual authors, too, the editors, by dictating and pontificating sonorous evaluative generalizations, stifle individual response and discourage close reading. Thus, in the introduction to Hawthorne, for instance, the students are told that "Hawthorne's triumph is twofold: it is in his ability to bring both levels [of allegory] to vivid life simultaneously and maintain them without conflict, and in the profundity of his exploration of human nature." Of William Carlos Williams the students are told that "Originally his poetry was influenced by the Imagists." The student is referred to page 638, where he is told only that the Imagist creed called for "poetry that is hard and clear." (Yet on page 642 Sandburg is linked with the Imagists for admiring "delicate, misty word pictures.") Theodore Roethke's remarkable poem, "The Waking," a blend of *carpe diem* plus the classic dying-into-life theme, all shaped into an unprecedented statement by this particular poet's mode, mood, and tone of creation, is introduced with the statement that it represents the author's "spare language and subjective probing,"—as though either spareness or subjectivity distinguished Roethke from Cummings a few pages earlier, or as though spareness and subjectivity were not, in a way, of the essence of virtually all poetry. And of Cummings, by the way, the student is told, "Before you read the next poem, you should know that Cummings often uses verbs as nouns. . . ."

How much more instructive, it would seem to me, were the student to work out for himself the devices by which a Cummings poem achieves its meaning. How much better for the cultivation of the free spirit of inquiry

² The Commission on English of the College Entrance Examination Board, *Freedom and Discipline in English* (New York: College Entrance Examination Board, 1965), p. 55.

in the student if he, himself, were to discover (as probably he will not anyway till he is past adolescence) Hawthorne's "profundity of . . . exploration of human nature." And how utterly meaningless to dictate to a student that language is "spare," or "subjective," or "delicate," or "misty." In fact, in the light of critical thought about rhetoric and the nature of language and images, how questionable to assign such attributes in the first place.

The second manifestation of weakness in the pedagogic apparatus pertains not to the manner in which the apparatus teaches, but the irrelevance of so much of it. At times it is simply that the plethora of questions about literary works seems merely to swell the pages, having in fact little to do with the work at hand. For instance, in his poem "Spring and All," William Carlos Williams makes the point that even in the stark, chilled, stubble of the early spring, there is beginning a subterranean stirring and awakening.

All along the road the reddish
purplish, forked, upstanding, twiggy
stuff of bushes and small trees
with dead, brown leaves under them
leafless vines—

The editors ask: "What two sorts of vegetation are contrasted in lines 9-13?" Not only is the question irrelevant to the poem, but it implies an inaccurate reading of it, since the lines present an accretion—two items in evidence of the same thing—rather than a contrast.

The major irrelevancies arise not so much from the treatment of specific literary works, as from all the bonuses that, though they may make for pleasant browsing, deny the integrity of literature as both an art form and a unique mode of experience. If literature takes for its domain the explora-

tion of sensations, tones, and forms of consciousness that are considered from a different perspective, or not at all, by other sciences and arts, and if learning to read literature means learning to arrive at the meaning by availing oneself of the devices, how completely and totally beside the point are many of the footnotes. For example, in connection with Mark Twain's *Roughing It*, we are told that Lake Tahoe is "approximately twenty-one miles long and twelve miles wide, located on the California-Nevada line." In connection with Kazin's *A Walker in the City*, we are told in a note the precise length of the Brooklyn Bridge; in another, the geographical bounds of "lower New York,"; and in another, the ownership of the *New York World* between 1883 and 1931.

My argument is neither with the cosmic importance of these facts, nor with their import for our life and times. My argument is that, by being placed in a literature text, and being appended to works presented as literature, these world almanac snippets miseducate the student about the manner in which literature is read, about the things that are important to look for in a work of literature, and, finally, about the ontological status of the work of literature.

A similar charge may be levied against the eleven-page glossary. One may reasonably contend that a student should know the lexical meaning of the words he reads. But this glossary, giving the impression of being one more item for the sales brochure, is singularly useless when it defines such obvious words as *fauna*, or when it engages in the euphemistic circularity of defining *bawd* as "a procurer or procuress." The rationale of the glossary is made still foggier when one notes that, in fact, many words (such as

peat, or gunwale) are defined in the footnotes.

The beautiful illustrations in the Ginn text present a more subtle problem in irrelevance. When the publishers announce the text as being a "self-contained art program," they are being patently chauvinistic and rapacious. Yet admittedly one may truly obtain, in some impressionistic and over-generalized way, a sense of a place or of an era by perusing *Horizon* or a *Life* picture history. I will therefore not insist, puristically, that the pictures don't help the student learn to read a work of literature, nor will I belabor the point that in many instances the illustrations have nothing to do with the literary qualities of the work they accompany. Rather let it be pointed out that the beautiful reproductions are not a "self-contained art program" at all; that any instruction that comes of the pictures will be a private transaction between the student and the picture; and that the captions are inane, gratuitous, and insulting. What, for instance, is the eleventh-grade pupil (who may be taking trigonometry) to think when the editors write under a Hudson River school, Romantic landscape: "The figures here are small in the vast space, giving a lonely quality typical of American painting"? (And is American Romantic painting "lonelier" than German Romantic painting?) And on page 48, Winslow Homer's fisherman, looking up at a distant thunder cloud, courageously rows in his large fish. "Homer," the editors help the poor student (who is reading Emerson, and Wallace Stevens, and James Baldwin), "Homer makes us wonder if the fisherman will get back to his ship ahead of the lowering fog."

In brief, the new Ginn American literature book has many short-com-

ings, including some I have not mentioned at all. But its major fault seems almost a corollary of its attractive exterior. Well produced, beautifully illustrated, frequently limiting itself to short, colorful literary extracts, and pre-shaping all this into convenient generalizations, the book would seem to me to interfere with the students' growing skill at close reading, with his developing self-reliance, and with the free play of the intellect after he has responsibly analyzed a document or a body of data.

To say that this is one of the best American literature texts available is merely to deplore once again the sorry state of high school English texts.

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SCHOOLS IN AN AGE OF MASS CULTURE.
by Willis Rudy.

Englewood Cliffs, New Jersey: Prentice-Hall, 1965. 374 pp. \$3.00.

If librarians were not so slavishly committed to the Dewey decimal system, and educators not so skittish about politics getting too close to the schools, Willis Rudy's *Schools in an Age of Mass Culture* might logically be shelved side by side with *The Making of the President, 1964*.¹ The two books enjoy a greater natural affinity than either cataloging procedures or traditional suspicions might admit. Both solidly demonstrate that highly familiar and seemingly over-reported events and issues can be infused with fresh and engaging readability. Both display the assurance and the faith in craft of the experienced writer, for what neophyte author would deign to

¹ White, Theodore, *The Making of the President, 1964*. (New York: Atheneum, 1965), 431 pp.

seek a sense of vitality and even an aura of suspense in materials which readers already know more about than they care to? And both arouse tremendous admiration for the thoroughness and ingenuity of the seasoned professional who somehow manages to discover heretofore unpublished quotations, new juxtaposition of views, and previously unused perspectives about topics ordinarily conceived as too recent and too often discussed to bear recounting.

Rudy's *Schools in an Age of Mass Culture* examines in historical perspective such familiar topics, for example, as the segregation issue, the school as an arena for the church-state controversy, the "cold war" between liberal and professional educators, the child-centered school, and the life-adjustment movement. The author does not attempt a comprehensive or integrated survey of recent American educational history, but rather chooses to explore these and other highly-recognizable topics as independent themes. There is, furthermore, as much if not more space devoted to contemporary, and hence more readily remembered, manifestations of these themes as there is to events and developments in the early decades of the century.

But it is only chapter titles and sub-headings, rather than the inner content, which turn out to be tired and overly-familiar. Indeed, in dealing with many topics Rudy achieves surprisingly dramatic effects. His review of the segregation issue is begun by recapturing the excitement which permeated the high-ceilinged chambers of the United States Supreme Court at 12:52 P.M. on May 17, 1954. The Chapter on "Church, State and School" opens with Francis Cardinal Spellman's angry denunciation of Eleanor Roosevelt in July, 1949, and uses the subsequent

flurry of editorials and public pronouncements as a unifying theme in examining the issue in its full complexity. In a similarly effective manner, the life and work of Arnold Gesell is made to serve both as introduction and as continuing leverage for the analysis of "Child-Centered Schools."

But while dramatic effects are often achieved, the dialogue is even more engrossing. The essential success of *Schools in an Age of Mass Culture* is that the characters in the drama seem to be making their own points rather than simply responding to the manipulations of an almost visible puppeteer. Only rarely are long quotations employed, but skillful paraphrasing and sensitive selection of phrases and brief excerpts from a wide range of sources evoke the feeling of participating in an animated drawing-room conversation rather than listening to a lecturer.

Rudy's craftsmanship as an intellectual historian is substantial. To produce *Schools in an Age of Mass Culture* required scanning a massive number of sources, remarkable ingenuity in keeping notes and impressions in retrievable order, and a truly grandiose patience in sifting through countless technical volumes to discover an occasional social or cultural clue. In just one short section, for example, Rudy successfully manipulates a vast literature, much of it hortatory and technical, on sports and athletics to tease out the relationships of physical education programs and interscholastic athletics to the drift towards "The Adjusted Child." In his chapter on "Evaluations of American Education by Foreigners" Rudy apparently chose to review sources in Spanish and French as well as those available in English or in translation. Many other sub-sections of chapters are based in part upon material not normally incorporated with-

in the historian's frame of reference—obscure doctoral projects, out-dated as well as contemporary sociological studies, ephemeral popular literature, long-since discarded as well as still-used text books in education, and even actual intra-school memos from principals and supervisors to teachers.

There are dangers, of course, in utilizing materials of such diverse and sometimes highly specific origin. The basic problem is to discriminate between evidence which indicates a given belief or opinion was in fact held and evidence which provides support that a given opinion is or was in fact true. Rudy constantly juggles both types of sources, but ordinarily he differentiates most satisfactorily. At many points in *Schools in an Age of Mass Culture* the narrative seems to be leading to untenable conclusions as outmoded studies or long-since discarded educational positions are developed. But just as one becomes convinced that important arguments or events have been ignored, a balancing line of evidence and interpretation is introduced.

Occasionally, of course, the author's more pronounced personal convictions upset the scales and no balancing occurs. Rudy is exceedingly exercised—almost to the point of physical violence—about interscholastic sports and the accompanying whoopla, community hysteria, and win-or-else psychology. He is even more vehement whenever there is an occasion to discuss—and the occasion frequently arises—popular indifference to academic excellence and intellectual accomplishment. Indeed, several chapters culminate either in plaintive laments about the American preference for Jacksonian over Jeffersonian democracy or rhetorical questions about an educational system which might nourish intellectual excellence.

Even the chapter entitled "May 17, 1954" concludes:

Even more than a merely mechanical and superficial 'integration' of heterogeneous and intellectually unclassified school populations, a thoughtful and systematic re-education of the American white majority, coupled with a selective segregation of students on the basis of talent and intellectual ability alone, might afford real hope of finding a way out of American democracy's oldest and gravest dilemma. (p. 283)

Few observers would decry concern for excellence, but many would be sceptical that some form of ability grouping provides an intellectually sufficient answer to the problem. But the point here is not to quarrel with Rudy's pedagogical opinions, but only to point out that occasionally he momentarily forgets his role as an historian exploring selected themes and assumes the stance of a partisan advocate.

Basically, however, *Schools in an Age of Mass Culture* deserves a highly positive response. It is lucidly written and delightfully readable. In my personal library, at least, it will be shelved next to *The Making of the President, 1964*.

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THE DYNAMICS OF INTERPERSONAL BEHAVIOR.

by Abraham Zaleznik and David Moment.

New York: John Wiley and Sons, 1964. viii + 520 pages.

This book grew out of its authors' work in developing a course of instruction in group and interpersonal relations at the Harvard Business School. Since

the book has been prepared with the needs of "men of action" for behavioral knowledge in mind, it maintains a consistent orientation to the behavioral world as seen through the eyes of the manager or administrator. The case material, which is used frequently to clarify the concepts around which the work is organized, is drawn almost entirely from business and industrial settings.

But, since the authors are also attempting a fresh synthesis of ideas and hypotheses out of a wide range of researches and theories in various behavioral sciences, they maintain a continuing dialogue with behavioral scientists in their writing. The tensions arising from this dual audience to which the authors address themselves—men of affairs and social scientists—lend dramatic interest to their work. These tensions have for the most part been handled creatively and the result is a significant contribution to the literatures both of administrative theory and of behavioral science.

In their attempt to illuminate and explain the processes of human interaction, the authors draw from a wide range of social and psychological sciences. "We have organized our study of interpersonal relations in organizations according to: (1) group processes, (2) the individual and interpersonal dynamics, (3) organizational aspects, and (4) leadership and change." (p. 445) In working with such a wide range of materials, selection has, of course, been necessary. Materials have been selected responsibly on the basis of two convictions, to be discussed later, and are presented and interrelated with admirable insight and understanding.

The first conviction which underlies the selection and synthesis of materials is pedagogical. It is the authors' belief that administrators and other men of

action should be taught in such a way as to enlarge and deepen their "reality orientation." With respect to the human situations with which they must deal, this requires of "leaders" or "change agents" the ability to diagnose "realistically" the social and psychological forces at play within those situations. Diagnosis can not be "realistic" if the diagnostician excludes himself as an integral element in the situation. "Reality orientation," therefore, requires more than ordinary awareness of himself as a person, of his own intra-psychic organization and dynamics, on the part of the "leader" or "change agent." The book, the course in which it developed, the training laboratories which the authors, with some qualifications, espouse are all devoted to enlarging and deepening the "reality orientation" of the "men of affairs," or indeed of the social scientists who participate in them. This conviction has guided the selection and organization of materials in this book.

The second conviction has to do with the nature of "basic reality" in human affairs. For the authors, a fundamental level of explanation of interpersonal relations must be grounded in individual personality. In their own terms:

Social processes can explain themselves only in the teleological sense that since the group exists, its processes must be directed in some ways toward maintaining and enhancing its existence. The explanations of the ways in which processes contribute toward the maintenance and enhancement of the group are functional explanations. Although useful for accepting and understanding the existence of the group, they do not really explain why it exists, or why its processes take the forms that they do. For this more fundamental level of

explanation we must look at the individual, his personality structure and intra-personal processes, and the ways that interpersonal behavior relates to the individual's personality. (p. 179)

At another point, the authors clarify further this conviction and its bearing upon the knowledge synthesis which they have attempted.

The energy for interpersonal relations, as with all action, belongs to the individual. . . . The meaning of the technical, social, and organizational environments in which interpersonal relations unfold and the process of behavior itself can be viewed fruitfully as an extension of the individual's tendency to define symbolically the world in which he lives. (p. vi)

The authors have worked rather consistently within the framework of this conviction throughout their book. This has not been easy, since many of the researches and theories which they have used have been worked out on the basis of assumptions other than theirs. It is not necessary to assume that units for the analysis of behavior other than persons are more or less "real" than persons. Groups, organizations, cultures may be seen as autonomous objects of study, along with persons. And the interrelations between group or organizational or cultural variables and personality variables as they operate in behavioral situations may be studied without assuming that one set of variables is *per se* more fundamental than any other set. Moreover, many scientists are satisfied with functional explanation as the only type of explanation possible in scientific studies and throw doubt upon the feasibility or value of "substantial" explanations of behavioral

events. (I am assuming that "substantial" explanation might be a polar term to "functional" explanation for the authors, though they do not use the former term.)

This intrusion of ontology into scientific explanations, which the distinctions between degrees of reality implies, sometimes leads to attempts to "reduce" group phenomena or organizational phenomena to personal phenomena. This temptation the authors have resisted. The use of general systems theory by which social systems of various magnitudes can be dealt with each in its own right, at least at the functional level of explanation, has helped the authors here. Part of the interest and freshness of their organization of materials stems from this second conviction, whatever its ultimate defensibility.

On the practical side, the second conviction may have reinforced an unwarrantedly pessimistic caution into the authors' estimate of the possibilities of various approaches to organizational change and leadership development. If change to be "real" must involve changes in the intrapsychic organization of all the persons involved, approaches to organizational change based on education and consultation will tend to be seen as superficial when compared to approaches based on personal therapy.

Whether or not a reader shares the authors' ontological conviction, and whether he is a social scientist or a social practitioner, he cannot but profit from study of this vivid and imaginative mapping of the field of interpersonal behavior.

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THE MAKING OF MASSIVE RESISTANCE.
by Robbins L. Gates.
Chapel Hill: University of North Carolina Press, 1964. 222 pp. \$6.50.

When the Supreme Court of the United States decided, in 1954, that segregation of school children by race in the public schools was contrary to the equal protection guaranty of the Fourteenth Amendment of the federal Constitution, the responsible political leaders of Virginia, headed by Senator Byrd, deliberately decided upon a policy of "massive resistance." In this fine book, Robbins L. Gates, academic dean at Fairfax Hall, Waynesboro, Virginia, tells in great detail the story of the massive resistance movement in Virginia during the first two years following the Court's decision. Himself a Southerner by birth and residence, Dr. Gates writes dispassionately and learnedly about the turbulent events of those two years, without making any secret about his own views, for he regards the caste system, the perpetuation of which is the essential issue, as morally wrong and historically anachronistic.

That very high public officials, such as United States senators, state governors and party leaders, should counsel resistance to law, when their basic function is to uphold the law and the orderly relations which are possible only within the ambit of a legal system, is a very remarkable fact. Perhaps in the long perspective of history these public officials will not be forgiven for counselling disorder when they are supposed to be the custodians of order. The basic explanation for this position of defiance, according to Dr. Gates, and it is the explanation which one would expect to find, is that it was necessary for internal political reasons. That is to say, the Byrd organization adopted the

policy of massive resistance not for the purpose of giving leadership to the South as a whole, but for the purpose of staying alive politically within the state. Since the Negroes of Virginia constitute but one-fifth of the total population, only the white voters really matter, and the Byrd organization apparently understood the strength of the white voters' commitment to the caste system. There is little reason to believe that the political leaders of Virginia who engineered the massive resistance movement did not share this commitment, but it is explanation enough that if the measure of success in politics is staying in power, then there can be little doubt about the astuteness of the Byrd organization.

As Dr. Gates shows, the whole massive resistance movement is full of irony. While its champions talk so loudly and frequently about the sacredness of that local self-determination which is called states' rights, they were adamant in refusing to allow the localities in Virginia to make their own decisions in respect to the desegregation of school systems which have traditionally been operated by local school boards. The massive resistance legislation enacted by the Virginia General Assembly in 1956 was based on the assumption that there could be only one state-wide policy, and that localities were not free to find their own solutions, although, generally speaking, they are free to do so in regard to other aspects of education. Furthermore, the segregationists in Virginia have made much of their devotion to individual liberties, arguing that the cause of resistance to integration was founded in a deep respect for individual liberties. Thus, the most important special interest group in the state on the side of segregation has the title of "Defenders of State Sovereignty and Individual

Liberties." And yet, as Dr. Gates points out, "the southern caste system does not respect the liberties of individuals in either caste; it merely imposes the racial bias of orthodox southern whites on all individuals in both castes." (p. 207) That is to say, it denies the Negro an opportunity to be judged on his individual merit; he cannot cross the caste line, whatever his intellect or achievements. This is not individualism, but rather its negation. By the same token, the segregationists parade as conservatives and as the implacable foes of "liberalism," but in fact what they are seeking to conserve is a caste system which is contrary to a basic principle of our whole culture, namely, that individual merit should be rewarded. If anything needs conserving, one would suppose it is this principle.

The author of this book is largely concerned with spelling out the full story of the struggle in Virginia, during the first two years after the *Brown* decision, to manipulate the constitution and laws of Virginia in order to frustrate the application of a rule of federal constitutional law in the Commonwealth. Thus the struggle was largely political and was concerned with legislation. What stands out very strikingly in this book is the complete political unimportance of the state's Negro population. There was not a single Negro in the legislature, and no legislator felt it necessary to consider what the Negroes wanted or needed. They simply have no serious part to play in the political life of the state. The state government is not their government, and makes no pretense of being their government. In the contest of this period they were little more than bystanders. The only political power they had, as the author points out, was their right of access to the judicial branch of the federal government. In Virginia

they were simply ignored. Because of the population ratio and the caste system, the Negroes are, as Dr. Gates notes, "a hopeless and subservient minority." (p. 202)

Nevertheless, there was a contest in the state over the question of what to do about the *Brown* decision, though it was almost wholly a contest among white people. Perhaps the most encouraging idea to emerge from this book is that opinion on the caste system is not monolithic, and that many white Virginians were willing, some of them eager, to make some sort of adjustment to the new dispensation. Apparently, some Virginians were genuinely relieved to learn that there was now a way to rid themselves of a morally indefensible system of social and political relations. Many white citizens were opposed to racial integration in the public schools, but not at the expense of closing the schools. They wanted to keep the public schools going more than they wanted to keep the Negroes out. Still others went along with the *Brown* decision because they believed in law and order. Perhaps the most important and articulate group who favored some sort of compromise which would lead to at least some racial integration in the public schools were the clergy, not all clergy, by any means, but apparently a goodly number.

Dr. Gates maintains that the politically active and articulate people of the state fell into four groups: the defiant segregationists, who did not want to yield an inch; the cushioning segregationists, who in accepting reality were willing to make some limited and grudging concessions; the save-the-public-school group, who were unwilling to sacrifice the public schools in order to avoid racial integration; and the integrationists, who were a small mi-

nority. During the two-year period under review, all sorts of plans jostled with each other for support and acceptance. The Gray Commission, which the governor appointed soon after the *Brown* decision came down, counselled avoidance of that decision through pupil assignment plus tuition grants to parents unwilling to have their children in any school which was attended by any Negro child. Governor Stanley favored the withholding of state funds from any integrated school. Extreme segregationists wanted the state legislature to take over and operate any school which a federal court would order to desegregate. Some wanted a three-school system, with white schools, Negro schools, and mixed schools. Some held out for pupil assignment by boards appointed by the governor, and thus free from local control or influence. Still others wanted to vest in the governor the direct power to make all assignments himself. Those who wanted to put all the power in the legislature or governor directly apparently proceeded on the assumption that neither the legislature nor the governor was amenable to suit in court. Still others wanted some sort of local option approach to the problem.

The General Assembly of Virginia adopted a large body of legislation to implement the struggle against integration of the public schools of the state. The heart of the program was the statute to withhold funds. In addition, it adopted an interposition resolution, but it neglected to do anything to implement it, resting content with the assertion that the state as a sovereign entity has the ultimate power to protect its people against an unconstitutional federal law. Other state legislatures in the Deep South also adopted interposition resolutions, but they

turned out to be little more than gestures of defiance. That the responsible political leaders of a great state should resort to this thoroughly discredited and logically absurd constitutional heresy is a reflection upon their determination to stay in power, whatever the cost.

As Dr. Gates makes clear in his closing chapter, massive resistance in Virginia failed to accomplish its purpose. The fund cutoff statute was held unconstitutional by the state's Supreme Court of Appeals, and the federal courts continued the slow process of integration. It is clear that the defiant segregationists, who were not going to stand for having a single Negro child attend any public school with a single white child, now or ever, have been defeated by the push of history.

It is difficult, and probably impossible, to resist an idea whose time has arrived. The failure of massive resistance in Virginia, where the resisters held all the trump cards, suggests that the caste system is doomed in this country, even though the struggle to abolish it will take much blood, sweat and tears, and a great deal of time and effort. This is the basic teaching of Dr. Gates' valuable book.

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TALENT AND PERFORMANCE.
by Eli Ginzberg and John L. Herma.
New York: Columbia University Press,
1964. 265 pp. \$5.00.

This book presents the results of a 1961 follow-up study of men who had been awarded graduate fellowships at Columbia University during the late 1940's. The major purposes of the study were to "explore the factors that influence the extent to which people with talent . . . perform at a high level of

competence" (p. 7), and to "conceptualize a schema which will enable us to perceive more clearly the processes whereby individuals . . . shape careers in a real world with its range of opportunities and barriers." (p. 8) In the latter undertaking the authors hoped "to make a contribution toward the formulation of a more general theory of career development." (pp. 200-201)

Data for the study were collected primarily by means of an extensive questionnaire composed mainly of open-ended queries concerning the person's job history, current work activities, avocational pursuits, formal education and training, war service, and family background. Usable returns were obtained from 282 of the 548 individuals initially identified as fellowship recipients; an additional 63 subjects were persuaded to fill out an abbreviated version of the questionnaire. Even though the subjects in the latter group were found to have achieved at a lower level than those who completed the longer questionnaire, the authors state that "published and unpublished sources" (p. 17) show that those subjects who failed to complete either questionnaire did not differ from the other subjects either in level of achievement or in career pattern. Such a conclusion is difficult to accept without further documentation, inasmuch as studies of mailed questionnaire surveys have consistently shown pronounced differences in the achievement levels of respondents and nonrespondents.

It seems that the authors' attempt to assess the effect of certain environmental factors on career development was doomed from the start. Without better data on the subjects' personal characteristics at the time they were students, there is no way to know whether or not those who were exposed to a given environmental experience were different

to begin with from those who were not exposed. Under these conditions, any obtained correlation between the person's later performance and exposure to the experience is necessarily ambiguous. Although the authors appear to be aware of this problem, they nevertheless attempt to relate some of their vocational criteria to a variety of past experiences (length and type of military service experience, age at marriage, number of children, length of time to complete the doctorate, etc.), presumably to evaluate the "effects" of such experiences on career development.

The primary effort of the authors was devoted to developing a set of classification schemes from a content analysis of the subjects' responses to the questionnaire. A different set of categories was devised to describe the participants' development in each of the following areas: career patterns, degree of success, values, degree of work satisfaction, degree of self-realization, and "life style." For example, three achievement levels (upper, intermediate, and lower) were developed on the basis of "income, rank, responsibility, quality of employing institution, and personal reputation." (p. 91) Similarly, the "value orientation" of the subjects was classified as being of the social, ideological, individualistic, or leadership type. In their threefold classification of "career patterns" (straight, broad, and variant), the authors have introduced an unnecessary degree of ambiguity in an apparent effort to avoid judgmental connotations: "straight" really implies "narrow" (in contrast to "broad"); or perhaps "broad" implies "crooked" (in contrast to "straight"). The "variant" pattern might be better termed "vacillating" or "irregular."

A recurring problem for this reviewer in attempting to understand these different classification schemes is that the

categories—in particular those for classifying career patterns and value orientations—appear to overlap. A more serious problem, from a methodological point of view, is that the authors have supplied no evidence concerning the reliability with which independent judges can sort subjects into the various categories. It seems likely that the reliability of some of the classification schemes is very low.

A major portion of the book is devoted to an analysis of cross-tabulations involving selected pairs of these categorical classifications (e.g., type of value orientation versus type of career pattern). Since cross-sectional comparisons of this nature could have been generated as well by using data obtained from any group of professional men, the "longitudinal" aspect of the study is largely irrelevant to the bulk of material presented. The authors do not appear to be aware that many of the "relationships" between categories probably involve circular use of the information provided by the subjects. There is little point, for example, in showing that career patterns and value orientations are related, if the same information in part determines the subject's status on both variables.

This book will tend to be very frustrating for the statistically knowledgeable reader, or even for the reader who wishes merely to see the data upon which conclusions are based. The authors' general procedure is to present only scanty tabular data, and then to illustrate their conclusions by means of anecdotal excerpts from individual case histories. Many references to quantitative findings are not accompanied by tabular presentations or quantitative documentation of any kind. All cross-tabulations were presumably evaluated by chi-square tests of significance, although none of these tests is actually

reported, and no estimates of the degree of correlation between variables are given. The frequent omission of data showing the N's upon which the percentages in each category are based is particularly annoying.

Practically all of the subjects appear to have achieved a considerable degree of vocational success, and most were satisfied with the directions their careers had taken. While such findings were to be expected (in view of the rigorous screening involved in the selection of graduate fellows by a major university), the possibility remains that the least successful and least well-adjusted individuals are more likely to be among those who failed to complete the questionnaire.

Many seemingly important results are mentioned only casually in the text: "those who attended Ivy League Colleges (other than Columbia) or who attended other academically strong private colleges were significantly overrepresented in the lower achievement levels" (p. 101); and "those who had received no undergraduate honors... were more likely to be in the top achievement level than those who had been singled out for recognition." (p. 102) (Unfortunately, no tabular data are presented in support of either finding.) The latter finding is particularly difficult to understand in the light of the positive association (Table 11) found between achievement level and *graduate* grades. A finding of possible significance for future research is that the most successful people tended to marry more often (and also earlier) than the less successful ones.

Whether or not the authors' "conceptual framework" will prove to be useful for future theoretical developments in the field is a moot question. They have made the task for other researchers and theoreticians all the more

difficult by failing to relate their ideas to the previous work of others. Brief mention is made of the early research of Roe and Terman, but no reference is made to the important research on career choice and career development done by Holland, Clark, Strong, Bordin, and many others. Although the bibliography includes some of the major books in the field (few are actually referred to in the text), virtually none of the relevant journal literature is cited.

In short, this book appears to contribute little of either a substantive or theoretical nature toward a better understanding of "talent and performance."

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A PSYCHOLINGUISTIC EXPERIMENT IN
FOREIGN-LANGUAGE TEACHING.

by George A. C. Scherer and
Michael Wertheimer.

New York: McGraw-Hill, 1964. 256 pp.
\$7.50.

The experiment described in this book compares two methods of teaching German. One method uses the traditional approach including reading, formal grammar, and written exercises from the start; the other tries the audio-lingual approach, with a strictly pre-reading period of twelve weeks and considerable use of the language laboratory during the remainder of the first year, grammar being taught by structural drills. The testing of students lasted two years, but during the second year the students who had started with a book and those who had not followed the same program and were not separated. To facilitate comparison, the material of both classes was the same. The main goal of both

groups of students was "reading ability." In other words, the primary question prompting this experiment was not whether or not the audio-lingual students would learn to speak German faster and better than the others but whether or not they could learn to translate written German as well as the others within a year, or within two years.

In matters involving the behavior of human beings, complete objectivity is not attainable. One cannot expect the comparison of two teaching techniques to be perfectly controlled and measured; such a comparison involves students, teachers, and experimenters—three causes of error. Five classes of students cannot be exactly equal to five others in their intellectual level and language aptitude any more than in their study conditions and efforts to concentrate. Five instructors cannot show the same ability to teach with one technique as five others with another. For one who is aware of this, it takes courage and wisdom to undertake an experiment for the comparison of two teaching techniques in which actual classes and instructors are used. George Scherer and Michael Wertheimer of the University of Colorado had this courage. Their chance of reaching results that could be taken seriously was enhanced by the fact that one is a language teacher and the other a psychologist—one a specialist in teaching techniques, the other an authority in testing humans and interpreting test data. But it takes more than a good team to run a good experiment; it also takes good equipment, and the University of Colorado happens to have one of the best language laboratories in the country with maximal versatility and very high fidelity.

The Colorado experiment described in this book was inspired by another

experiment, performed twenty years earlier at the University of Oklahoma, to compare the results of audio-lingual techniques with those of the traditional approach in teaching French. In the Oklahoma experiment the audio-lingual class had started with a pre-reading period of thirteen weeks during which all the programmed material was learned from the teacher's voice in class and overlearned from records as home work—tape recorders were not yet available in 1943; records had to be cut daily—after which time the audio-lingual class transferred to the use of a textbook for the rest of the year. The "traditional class" had used a textbook (the very one which was to be used by the audio-lingual students) from the beginning, learning the sound of French by reference to printed words and spelling rules. The results had been overwhelmingly in favor of the audio-lingual method for skills of aural comprehension and oral expression; they were even slightly in favor of it for reading and writing the language by the very end of the year as the students with a better speaking ability had finally caught up in reading ability.

Unfortunately the Oklahoma experiment had been improvised at the last moment in September, without funds for help, and it lacked the necessary controls which assure a certain degree of objectivity in the results. The instructor had tried to be objective in testing both classes in the same manner in all skills (the same person taught both classes) but could not persuade his Oklahoma colleagues, who closely watched the students' progress throughout the year, that the difference in results was not due mostly to the higher degree of enthusiasm among the audio-lingual students. And to outsiders the Oklahoma experiment stood only, from there on, as an indication—or a hope—

of what *might* result if the audio-lingual techniques were broadly applied. Linguists, psychologists, and language teachers alike were anxious to see someone do this Oklahoma experiment over, with appropriate controls. In the course of these twenty years, many planned to do it and later withdrew when they realized the difficulty of creating conditions of objective comparison.

The Colorado attempt, carried out with the help of NDEA funds, consequently aroused great interest when it was announced a few years ago. Experts were in charge and more experts were consulted. The degree of objectivity was to be high. There were now thirteen experimental classes, six for the eye technique and seven for the ear technique. Instructors and students were assigned at random. The director of the eye sections was a fierce opponent of audio-lingual learning. The two-year language material to be learned was the same for both groups. The same tests were administered to both groups in six skills: to the four classics of oral comprehension, speaking, reading comprehension, and writing, were added translation tests both ways. The tests were made maximally objective and "pure." For instance, when it was found that the Princeton oral comprehension tests depended on multiple choice tests from *printed* lists of items, the tapes were recorded over so as to present the multiple choice lists by ear and not by eye (which might mix reading ability with oral comprehension ability), thus making the tests purer. Students were pre-tested and measured for everything under the sun, from language to mathematics aptitude or from sex to motivation, and it was ascertained that the two groups were satisfactorily matched. Some factors, however, could not be matched; for in-

stance, the length of daily study, which turned out to be much shorter for the audio-lingual than for the traditional, especially during the initial weeks. And who is to tell whether or not the audio-lingual learning-sequences were well enough composed to favor acquisition of the active skills as much as the reading learning-sequences favored the passive skills, or how adequate the length of twelve weeks for the pre-reading period was?

Now the results are available in seventy-five pages of correlation tables and comments which should satisfy the technician of testing as well as the language instructor. They give a wealth of information, not only about the relative merits or efficiency of two teaching techniques, but also about the purity and validity of tests themselves, and about many internal factors unsuspected by the average teacher.

Colorado results essentially agreed with those of Oklahoma, but not entirely. In both experiments the audio-lingual way of teaching produced much better results in the speaking and listening skills than did the traditional way. Moreover, the Colorado experiment showed that the difference in speaking and listening ability between students who had started one way and those who had started the other way persisted throughout the second year, even though the students were all mixed and followed the same program. But in the Colorado experiment the students who had started audio-lingually (for twelve weeks) were not better than the book students in reading and writing skills; they were only about even with them, or not significantly weaker. In the Oklahoma experiment the ear students, it will be recalled, were slightly better than the book students, even in reading and writing, at the very end of the first year. This discrep-

ancy between the two experiments may well come from the unusual enthusiasm the ear students had developed. It could also be explained, however, by the fact that the language of the first experiment was French, and that of the second, German. Everyone knows that high frequency words such as articles, pronouns and concrete nouns are alike in German and English, whereas the low frequency words with abstract meaning are the ones to be alike in French and English. This remark suggests that, had the Colorado experiment been done with French instead of German, agreement with the Oklahoma experiment in reading and writing might have been closer.

One note of special interest: The Oklahoma report had insisted on the importance of developing habits of *direct* association between sound and meaning when learning to speak a second language. Scherer and Wertheimer made special efforts to test and measure this factor. What they found in Colorado confirms the Oklahoma assumption. The audio-lingual students had significantly better habits of direct association than the book students.

There was a major difference, however, between the Oklahoma and the Colorado experiments. The former had speaking and understanding as a major goal; the latter, as was mentioned earlier, had reading as a major goal, with speaking as a means toward reading and not as an end. The material of the audio-lingual group was therefore composed with reading in mind. It pressed the building of vocabulary from the first day. Had it been composed strictly for the purpose of learning to speak, the first lessons might have been shorter, with less vocabulary, thus making it really possible for the student to reach the stage of automatic reaction. In the Oklahoma ex-

periment, the vocabulary of the first three weeks was only twenty words per week because the students could not learn to manipulate more than that with complete automatism. But it was felt that, because of this thoroughness in the initial stage, ease and speed were kept while the pace of learning was increased in later stages. In the Colorado experiment the vocabulary of the first three weeks was several times larger than sixty words. We wonder whether this was not a hindrance for the reading goal as well as for the speaking ability. Comparative experiments in pacing the various stages are still needed to answer this question.

With this important work, a linguist and a psychologist have not only teamed efficiently to furnish objective data on two opposed techniques of language teaching, they have also designed the pattern for further investigations in other languages.

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HOW TO TEACH YOUR BABY TO READ. by Glenn Doman.

New York: Random House, 1964. 166 pp. \$3.59.

This book was written for parents. As such it may seem unfair to expect careful documentation in support of Dr. Doman's many startling generalizations and conclusions. Still, it seems reasonable to expect Dr. Doman to have gone to other professional groups equally concerned with problems of learning before presenting his theories as truth.

In the foreword Dr. Doman states, "It was now clear that the neurological growth could be *speeded* as well as delayed." (p. xx) and "Nowhere is the

ability to raise neurological organization more clearly demonstrated than when you teach a well baby to read." (p. xxi) Much educational evidence is reflected in the first statement since it is supported by considerable evidence in studies of child growth and educational psychology. The emphasis upon the ability to read in the second statement is highly problematic.

Dr. Doman seems to be impressed that children learn to read words in television commercials—even to the point of claiming that the commercials have more charm for young children than do other programs. All those who have worked with young children from Comenius, Pestalozzi, and Froebel to the present day have been aware of the fact that words which are prominent in the environment of the child gain a response from the child. These words may be in signs on stores, stop-and-go signals, the wrappers of breakfast cereals, or printed on toy blocks. In 1846 a book was published called "John's First Book" which became the basis of the so-called "word method" of teaching reading. Its author explained that a little four-year-old girl and he were waiting for breakfast while the father was in the yard milking. It happened that the word "cow" appeared in the paper he was reading. He showed it to the child calling attention to the word and the animal her father was milking. The child understood. With this clue he taught other words and sentences which were presented in the book he wrote for children. The possibility of such procedures are carefully documented in Dr. Nila B. Smith's *Reading Instruction for Today's Children*¹ as are the problems created by this approach.

¹ Nila B. Smith, *Reading Instruction for Today's Children* (New Jersey: Prentice-Hall, Inc., 1963), 594 pp.

Educators are well aware of the language growth that takes place during early childhood. This information is the result of sound research done at Yale, the University of Michigan, the University of Minnesota and other centers. As a result a major emphasis in all nursery and kindergarten programs has been upon the experiences that foster vocabulary development and sentence usage. The ability to express ideas through speech and to listen to ideas and the individual words that carry meaning is a major objective of any kindergarten program.

Dr. Doman states, "It makes no difference to the brain whether it sees a sight or hears a sound." (p. 6) It would seem to follow then that teachers who have stressed the listening approach to language have been contributing to neurological organization. However, when Dr. Doman equates loud talk with large print the burden of proof rests with him. Few teachers of young children would agree with his statement, "Everyone talks loudly to children, and the younger the child is the louder we talk." (p. 6) This statement is about as correct as, "We have assumed that children hate to learn essentially because most children have disliked or even despised school." (p. 27)

In some cases, teachers will agree that we have been "limiting the child by underestimating what he can learn." (p. 19) There is much yet to be discovered about the identification of individual differences. But to base the above statement on the fact that the identification of printed words is not stressed as an aspect of the education of the young child in our culture places an exaggerated value on the interpretation of the printed form of language symbols.

Dr. Doman speaks of the idiot American among the Australian aborigines

because the American does not know the skills essential to that environment. It remains to be shown that the skill of recognizing a few words in print or the letters of the alphabet serves the young child in a way that is useful to his environment. Reading as a source of information for children is secondary to that of listening. Certainly the vocabulary suggested in the reading materials suggested by Dr. Doman adds little to a child's information. However, Dr. Doman is on sound ground in asserting that experiences with things and people in the environment must come prior to establishing the symbol for them in either its oral or printed form.

One of the most questionable statements in the book is concerned with learning foreign language. Using the experiences of American families in the German occupation, Dr. Doman states "If the Smiths happen to have a number of children when they go to Germany, the language proficiency will be directly inverse to the age of the family member." (p. 49) The ability of the young child to learn the language of his environment is not questioned. As Dr. Doman points out, even the morons of a culture possess a functional use of language. As one who served in the occupation, I can only observe that American children seldom mastered the language at a level equal to that of native children of their same age. It should also be noted that adults who were given concentrated language training for as short a time as six months could operate at highly technical levels of language usage. I wonder if Dr. Doman knows of any group of children, even those in the language classes of the dependent schools of the occupation, who were compared with a group of adults who put forth an effort to study the language? The purpose of his statement, I assume, was to

impress upon parents the ability of children to master language. I fail to see that this ability necessitates the presentation of the printed form of the word at the same time one is learning to speak it. Dr. Doman's personal experience with French would indicate that it was poor teaching to use the printed form of French prior to the mastery of an audio-oral form.

Dr. Doman has chosen to tilt with some old educational windmills that have been defeated long ago. In an environment of letter names on car licenses, dial telephones (that are favorite toys of children), and call letters of TV and radio stations, teachers expect children to know the names of letters. Certainly the child who can read when he comes to school is welcomed. But if in the process of learning to read he has acquired emotional scars or generalizations that prove false when faced with polysyllabic words and extended vocabulary of the upper grades, he has been handicapped, not helped.

There is always an efficiency factor in teaching that should be respected. How much more effort must be used to teach a skill at age four than it would take to teach that skill at age six? There are many things that can be taught with individual tutoring on the part of a patient adult to a four-year-old that can be taught to a group of children in a few hours after they have gained other supporting skills.

It would appear that Dr. Doman is advocating that parents spend time with their children in a purposeful language activity, playing games with words or letter cards. He asks that it be an emotionally comfortable time without stress. If this is the "gentle revolution" he advocates, then teachers will condone his efforts because of its effect upon the total language facility of the child. It is unfortunate that so much of the activity is labeled as reading or that the case for such activity is so overstated.

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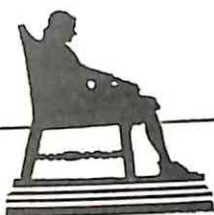
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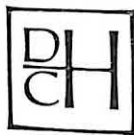
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